370445 - (CVE-2007-0981) embedded nulls in location.hostname confuse same-origin checks (Zalewski XSS vulnerability)

370445 - (CVE-2007-0981) embedded nulls in location.hostname confuse same-origin checks (Zalewski XSS vulnerability) - Author not stated, bugzilla.mozilla.org.

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Content

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Third patch + dbaron's comments

19 years ago

[Daniel Veditz [:dveditz]](https://bugzilla.mozilla.org/user_profile?user_id=1689)

4.00 KB, patch

|

bzbarsky

: review+

darin.moz

: review+

dbaron

: superreview+

jay

: approval1.8.1.2+

jay

: approval1.8.0.10+

| Details | Diff | Splinter Review | |

Flags: wanted1.8.1.x+

Flags: wanted1.8.0.x+

Flags: blocking1.8.1.2+

Flags: blocking1.8.0.10+

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[Daniel Veditz [:dveditz]](https://bugzilla.mozilla.org/user_profile?user_id=1689)

Assignee | | |

Updated

19 years ago

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Whiteboard: [sg:high]

Component: Networking: Cookies Networking

QA Contact: networking.cookies networking

Attached patch Stop hostname attack (obsolete) — Details — Splinter Review

Attachment #255211 - Flags: superreview?(darin.moz)

Attachment #255211 - Flags: review?(bzbarsky)

Attachment #255211 - Flags: approval1.8.1.2?

Attachment #255211 - Flags: approval1.8.0.10?

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Summary: Zalewski cookie stealing / same-domain bypass vulnerability Zalewski cookie setting / same-domain bypass vulnerability

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Blocks: 370501

Attached patch sledgehammer approach to fix ::SetSpec (obsolete) — Details — Splinter Review

Assignee: nobody dveditz

Status: NEW ASSIGNED

Attached patch more limited null squashing in setSpec (obsolete) — Details — Splinter Review

Attachment #255245 - Attachment is obsolete: true

Attachment #255249 - Flags: superreview?(jst)

Attachment #255249 - Flags: review?(dbaron)

Attachment #255249 - Flags: approval1.8.1.2?

Attachment #255249 - Flags: approval1.8.0.10?

Attachment #255245 - Attachment is obsolete: false

Attached patch Third patch + dbaron's comments — Details — Splinter Review

```
? netwerk/base/src/nsStandardURL-1.cpp
Index: netwerk/base/src/nsSimpleURI.cpp
===================================================================
RCS file: /cvsroot/mozilla/netwerk/base/src/nsSimpleURI.cpp,v
retrieving revision 1.43
diff -u -p -6 -r1.43 nsSimpleURI.cpp
--- netwerk/base/src/nsSimpleURI.cpp 29 Jun 2005 21:03:23 -0000          1.43
+++ netwerk/base/src/nsSimpleURI.cpp        15 Feb 2007 21:47:54 -0000
@@ -152,13 +152,13 @@ nsSimpleURI::SetSpec(const nsACString &a

     // nsSimpleURI currently restricts the charset to US-ASCII
     nsCAutoString spec;
     NS_EscapeURL(specPtr, specLen, esc_OnlyNonASCII|esc_AlwaysCopy, spec);

     PRInt32 pos = spec.FindChar(':');
-    if (pos == -1)
+    if (pos == -1 || !net_IsValidScheme(spec.get(), pos))
         return NS_ERROR_MALFORMED_URI;

     mScheme.Truncate();
     mPath.Truncate();

     PRInt32 n = spec.Left(mScheme, pos);
@@ -179,12 +179,18 @@ nsSimpleURI::GetScheme(nsACString &resul
     return NS_OK;
 }

 NS_IMETHODIMP
 nsSimpleURI::SetScheme(const nsACString &scheme)
 {
+    const nsPromiseFlatCString &flat = PromiseFlatCString(scheme);
+    if (!net_IsValidScheme(flat)) {
+        NS_ERROR("the given url scheme contains invalid characters");
+        return NS_ERROR_MALFORMED_URI;
+    }
+
     mScheme = scheme;
     ToLowerCase(mScheme);
     return NS_OK;
 }

 NS_IMETHODIMP
Index: netwerk/base/src/nsStandardURL.cpp
===================================================================
```

```
RCS file: /cvsroot/mozilla/netwerk/base/src/nsStandardURL.cpp,v
retrieving revision 1.82.4.8
diff -u -p -6 -r1.82.4.8 nsStandardURL.cpp
--- netwerk/base/src/nsStandardURL.cpp      22 Jun 2006 19:13:01 -0000          1.82.4.8
+++ netwerk/base/src/nsStandardURL.cpp   15 Feb 2007 21:47:56 -0000
@@ -501,12 +501,14 @@ nsStandardURL::BuildNormalizedSpec(const
     // already point to a [ ] delimited IPv6 address literal.
     // However, perform Unicode normalization on it, as IDN does.
     mHostEncoding = eEncoding_ASCII;
     if (mHost.mLen > 0) {
         const nsCSubstring& tempHost =
             Substring(spec + mHost.mPos, spec + mHost.mPos + mHost.mLen);
+        if (tempHost.FindChar('\0') != kNotFound)
+            return NS_ERROR_MALFORMED_URI;  // null embedded in hostname
         if ((useEncHost = NormalizeIDN(tempHost, encHost)))
             approxLen += encHost.Length();
         else
             approxLen += mHost.mLen;
     }

@@ -1405,12 +1407,15 @@ nsStandardURL::SetHost(const nsACString
         if (flat.IsEmpty())
             return NS_OK;
         NS_ERROR("cannot set host on no-auth url");
         return NS_ERROR_UNEXPECTED;
     }

+    if (host && strlen(host) < flat.Length())
+        return NS_ERROR_MALFORMED_URI; // found embedded null
+
     InvalidateCache();
     mHostEncoding = eEncoding_ASCII;

     if (!(host && *host)) {
         // remove existing hostname
         if (mHost.mLen > 0) {
Index: netwerk/base/src/nsURLHelper.cpp
===================================================================
RCS file: /cvsroot/mozilla/netwerk/base/src/nsURLHelper.cpp,v
retrieving revision 1.60.2.3
diff -u -p -6 -r1.60.2.3 nsURLHelper.cpp
--- netwerk/base/src/nsURLHelper.cpp        20 Jul 2006 22:59:11 -0000  1.60.2.3
+++ netwerk/base/src/nsURLHelper.cpp        15 Feb 2007 21:47:57 -0000
@@ -504,17 +504,18 @@ net_ExtractURLScheme(const nsACString &i
```

```
    return NS_ERROR_MALFORMED_URI;
}

PRBool
net_IsValidScheme(const char *scheme, PRUint32 schemeLen)
{
-   // first char much be alpha
+    // first char must be alpha
    if (!nsCRT::IsAsciiAlpha(*scheme))
        return PR_FALSE;
-
-   for (; schemeLen && *scheme; ++scheme, --schemeLen) {
+
+    // nsCStrings may have embedded nulls -- reject those too
+    for (; schemeLen; ++scheme, --schemeLen) {
        if (!(nsCRT::IsAsciiAlpha(*scheme) ||
              nsCRT::IsAsciiDigit(*scheme) ||
              *scheme == '+' ||
              *scheme == '.' ||
              *scheme == '-'))
            return PR_FALSE;
```

Attachment #255211 - Attachment is obsolete: true

Attachment #255245 - Attachment is obsolete: true

Attachment #255249 - Attachment is obsolete: true

Attachment #255211 - Flags: superreview?(darin.moz)

Attachment #255211 - Flags: review?(bzbarsky)

Attachment #255211 - Flags: approval1.8.1.2?

Attachment #255211 - Flags: approval1.8.0.10?

Attachment #255249 - Flags: superreview?(jst)

Attachment #255249 - Flags: review?(dbaron)

Attachment #255249 - Flags: approval1.8.1.2?

Attachment #255249 - Flags: approval1.8.0.10?

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[Daniel Veditz [:dveditz]](https://bugzilla.mozilla.org/user_profile?user_id=1689)

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Attachment #255252 - Flags: superreview?(dbaron)

Attachment #255252 - Flags: review?(bzbarsky)

Attachment #255252 - Flags: approval1.8.1.2?

Attachment #255252 - Flags: approval1.8.0.10?

Attachment #255252 - Flags: review?(bzbarsky) review+

Attachment #255252 - Flags: superreview?(dbaron) superreview+

Attachment #255252 - Flags: approval1.8.1.2?

Attachment #255252 - Flags: approval1.8.1.2+

Attachment #255252 - Flags: approval1.8.0.10?

Attachment #255252 - Flags: approval1.8.0.10+

Attachment #255252 - Flags: review?(darin.moz)

Status: ASSIGNED RESOLVED

Closed: 19 years ago

Keywords: fixed1.8.0.10, fixed1.8.1.2

Resolution: --- FIXED

Attachment #255252 - Flags: review?(darin.moz) review+

Keywords: fixed1.8.0.10, fixed1.8.1.2 verified1.8.0.10, verified1.8.1.2

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Jesse Ruderman

| | |

Updated

19 years ago

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Summary: Zalewski cookie setting / same-domain bypass vulnerability embedded nulls in location.hostname confuse same-origin checks (Zalewski XSS vulnerability)

Whiteboard: [sg:high] [sg:high] xss

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Alias: CVE-2007-0981

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[Boris Zbarsky [:bzbarsky]](https://bugzilla.mozilla.org/user_profile?user_id=20209)

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Flags: in-testsuite?

Top

Recovery notes

Source evidence recovered on 2026-09-14. The earlier source capture (SHA-256 `e5812045e391d15f38f893b8571659fcfbc35b7da43c6f9b572cf68a0278e2bf`) is no longer available. This publication uses a separately preserved capture of the same document recorded on 2026-08-07 (SHA-256 `70a05b7af310499c774ee8d73d56cc366731c1a753a265a06e018ae8ca2ef3b4`). The existing article text is retained. The archive journal ties this replacement source to the same extracted content; differences in the published copy are documented formatting and footer cleanup. The missing earlier capture remains documented in the archive history.