

Insert Tests

See the [README](#) in the [Redirect](#) subdirectory before running any of the

The following tests inserting an Iframe into the root page requested by t
The iframe will occur at the end of the HTML document, just before the
the Iframe. This can be problematic if the size of the packet where the
happens the packet has to be fragmented so that the iframe can be ins
action can handle cases where the packet has to be framented.

Test Cases	Expected Result
Single Packet	When viewed in a browser, the Iframe should be invisible. Examining the page source should show that the Iframe was inserted immediately before the </body> tag.
Single Packet, Fragmented	When viewed in a browser, the Iframe should be invisible. Examining the page source should show that the Iframe was inserted immediately before the </body> tag.
Mulit Packet	When viewed in a browser, the Iframe should be invisible. Examining the page source should show that the Iframe was inserted immediately before the </body> tag.
Mult Packet, Fragmented	When viewed in a browser, the Iframe should be invisible. Examining the page source should show that the Iframe was inserted immediately before the </body> tag.
Ending </body> tag not found in a root request	An Iframe will not be inserted into the html source. But performing a second root request, using a valid page from above should result in an Iframe being inserted into the page.

Misdirect Tests

Test the insertion of two iframes into the root response

Test Cases	Expected Result
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Root Page Request

The original request will be viewed when using a browser, but when using wget or monitoring the packets using Wireshark then the double iframes will be visible.

see tests for info on setting up a valid test environment

the client. The insert only occurs on a root page request (e.g. www.madonnainn.com, www.google.com).
 </body> tag. If using Wireshark to examine the response to the client then the last packet should contain
 insert occurs has an insufficient amount of space to accommodate the addition of the iframe. When this
 erted without exceeding the max packet size. For this reason tests need to be ran to insure that the insert

Results (using alternate browsers)

Action	wget	IE	Firefox	Notes
Generate an alert and then request a valid root page by running this script: CherryBlossom/Test/Redirect/testSingleResponse.sh				
Generate an alert and then request a valid root page by running this script: CherryBlossom/Test/Redirect/testFragmentResponse.sh				
Generate an alert and then request a valid root page by running this script: CherryBlossom/Test/Redirect/testMultiResponse.sh				
From CherryBlossom/Test/Redirect run TBD				

Action	wget	IE	Firefox	Notes
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<p>Run CherryBlossom/Test/Redirect/testSingleResponse.sh</p>	<p>The downloaded page will contain two iframes. One for the redirect URL and the other having the URL of the original request.</p>	<p>The browser will display the original page. The redirect iframe will not be shown or viewable in the source</p>	<p>The browser will display the original page. The redirect iframe will not be shown or viewable in the source</p>	<p>This should work for any root page request</p>
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Test Cases

Single Packet – An Iframe can be inserted into a packet without causing any fragmentation

Single Fragment Packet – The original HTML content can be sent in a single packet, but the packet will be fragmented if an iframe is inserted

Multi Packet – The original HTML content will be sent in multiple packets. Inserting an iframe will generate the same number of packets

Multi Fragment Packet – The original HTML content will be sent in multiple packets. Inserting an iframe will fragment the last packet, so that an additional packet will be generated.

Packet Analysis of Redirecting a Single Packet

wget Client

No Action					Insert					Insert (FIN not set)					Mis
Type	SEQ	ACK	LEN	Dir	Type	SEQ	ACK	LEN	Dir	Type	SEQ	ACK	LEN	Dir	Typ
HTTP Get	1	1	101	out	HTTP Get	1	1	101	out	HTTP Get	1	1	101	out	
ACK	1	102	0	in	ACK	1	102	0	in	ACK	1	102	0	in	
HTTK OK	1	102	1153	in	HTTP OK/FIN	1	102	1061	in	HTTP OK	1	102	1226	in	
FIN/ACK	102	1154	0	out	ACK	102	1063	0	out	FIN/ACK	102	1227	0	out	
ACK	1154	103	0	in	FIN/ACK	102	1063	0	out	TCP Dup ACK	1154	102	0	in	
FIN	1154	103	0	in	TCP DUP ACK	989	102	0	in	ACK	103	1227	0	out	
ACK	103	1155	0	out	TCP DUP ACK	103	1063	0	out	TCP Dup ACK	1154	102	0	in	
										TCP Dup ACK	103	1227	0	out	in

IE Client

No Action					Insert					Insert (FIN not set)					Mis
Type	SEQ	ACK	LEN	Dir	Type	SEQ	ACK	LEN	Dir	Type	SEQ	ACK	LEN	Dir	Typ
HTTP Get	388	520	381	out	HTTP Get	388	520	381	out						
ACK	520	769	0	in	ACK	520	769	0	in						
HTTP OK	520	769	1110	in	HTTP OK/FIN	520	769	1183	in						
ACK	769	1630	0	out	ACK	769	1704	0	out						
					TCP ZeroWin	769	1704	0	out						
					TCP DUP ACK	1630	769	0	in						
					TCP ZeroWin	769	big	0	out						

FF Client

No Action					Insert					Insert (FIN not set)					Mis
Type	SEQ	ACK	LEN	Dir	Type	SEQ	ACK	LEN	Dir	Type	SEQ	ACK	LEN	Dir	Typ
HTTP Get	747	961	402	out	HTTP Get	1080	1472	402	out	HTTP Get	1080	1472	402	out	
ACK	961	1149	0	in	ACK	1472	1482	0	in	ACK	1472	1482	0	in	
HTTP OK	961	1149	1110	in	HTTP OK/FIN	1472	1482	1183	in	HTTP OK	1472	1482	1183	in	

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HTTP Get	1149	2071	333	out	ACK	1482	2656	0	out	ACK	1482	2655	0	out
ACK	2071	1482	0	in	FIN/ACK	1482	2656	0	out	TCP Dup ACK	2582	1482	0	in
HTTP 404	2071	1482	511	in	TCP Dup ACK	1789	2582	0	in	TCP Dup ACK	1482	2655	0	out
ACK	1482	2582	0	out	TCP Dup ACK	1483	2656	0	out					

	Re				
Dir	Type	SEQ	ACK	LEN	Dir

	Re				
Dir	Type	SEQ	ACK	LEN	Dir

	Re				
Dir	Type	SEQ	ACK	LEN	Dir

SP
