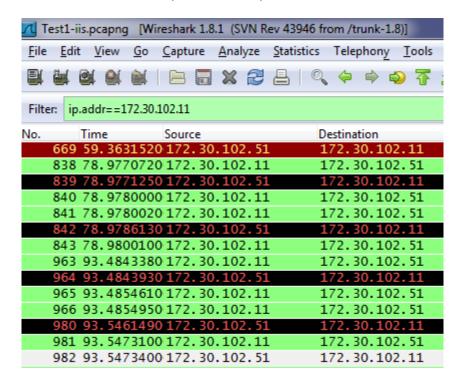
**TEST 1: F5 and IIS co-resident - Page Cannot Be Displayed** 

#### Data Leaving IIS before hitting wire

Referring to figure 1 below, this packet capture was taken on the IIS server and looks at data between the IIS server and the F5 (172.30.102.11).



(Figure 1)

Figure 2 shows the contents of the complete HTTP data leaving the IIS server. The payload is compressed ("Content-Encoding: gzip") and Wireshark is able to decompress it ("Content-encoded entity body (gzip): 5443 bytes -> 14940 bytes")

```
■ Frame 982: 2937 bytes on wire (23496 bits), 2937 bytes captured
Ethernet II, Src: Vmware_80:6c:83 (00:50:56:80:6c:83), Dst: Vmwar
Internet Protocol Version 4, Src: 172.30.102.51 (172.30.102.51),
H Transmission Control Protocol, Src Port: http (80), Dst Port: 545

    ⊕ [2 Reassembled TCP Segments (5803 bytes): #980(2920), #982(2883)]

    ∃ Hypertext Transfer Protocol

    HTTP/1.1 200 OK\r\n

    Cache-Control: private\r\n
    Content-Type: text/html; charset=utf-8\r\n
    Content-Encoding: gzip\r\n
    Vary: Accept-Encoding\r\n
    Server: Microsoft-IIS/7.5\r\n
    X-AspNet-Version: 4.0.30319\r\n
    Set-Cookie: ncMJBtest=Name=imamjbcookietest; expires=Fri, 26-Ju
    X-Powered-By: ASP.NET\r\n
    Date: Fri, 26 Jul 2013 14:40:50 GMT\r\n

    ⊕ Content-Length: 5443\r\n

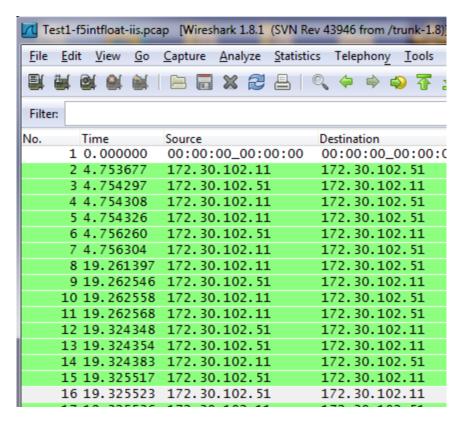
    r\n
    Content-encoded entity body (gzip): 5443 bytes -> 14940 bytes

    ⊕ Line-based text data: text/html
```

(Figure 2)

#### Data hitting F5's inside interface, from IIS (from F5's perspective)

Figure 3 shows the capture of traffic to-from the F5 and IIS server (taken from the perspective of the F5 using the tcpdump CLI command)



(Figure 3)

Figure 4 shows that the data has been corrupted. Wireshark is unable to decompress the contents of the gzip-encoded data (Content-encoded entity body (gzip): 5443 bytes [Error: Decompression failed]"

```
Frame 16: 1604 bytes on wire (12832 bits), 1604 bytes captured (12832 bits)
Ethernet II, Src: Vmware_80:6c:83 (00:50:56:80:6c:83), Dst: Vmware_80:70:d9 (00:

⊕ Transmission Control Protocol, Src Port: http (80), Dst Port: 54545 (54545), Seq

    ⊕ [4 Reassembled TCP Segments (5803 bytes): #12(1460), #13(1460), #15(1460), #16(1.

    ∃ Hypertext Transfer Protocol

    HTTP/1.1 200 OK\r\n

   Cache-Control: private\r\n
   Content-Type: text/html; charset=utf-8\r\n
   Content-Encoding: gzip\r\n
   Vary: Accept-Encoding\r\n
   Server: Microsoft-IIS/7.5\r\n
   X-AspNet-Version: 4.0.30319\r\n
   Set-Cookie: ncMJBtest=Name=imamjbcookietest; expires=Fri, 26-Jul-2013 14:42:50
   X-Powered-By: ASP.NET\r\n
   Date: Fri, 26 Jul 2013 14:40:50 GMT\r\n

    ⊕ Content-Length: 5443\r\n

⊕ Content-encoded entity body (gzip): 5443 bytes [Error: Decompression failed]
```

(Figure 4)

TEST 2: F5 and IIS Co-resident w/1000v SPAN capture - Page Cannot Be Displayed

## Data Leaving IIS before hitting wire (from IIS's perspective)

🔼 Te	st2_k	oefo	re_lea	aving_	_iis_ont	o_wire	e.pcapn	g [Wiresha	rk 1.8.1	(SVN F	Rev 439	946 from /tru	ınk-1.8	3)]
<u>F</u> ile	<u>E</u> dit	t <u>V</u>	iew	<u>G</u> o	<u>C</u> aptu	re <u>A</u>	nalyze	<u>S</u> tatistics	Telep	hon <u>y</u>	<u>T</u> ools	<u>I</u> nternals	<u>H</u> elp	
	<b>#</b>	<b>O</b>	<b>(4)</b>				X Z		, <b>(=</b>		征	<b>4</b>   ■		⊕ (
Filter	r: ip	.add	r==1	72.30	.102.11							Express	ion	Clear
No.		Tim	e		Sourc	e			estinat			Protoc	ol Le	ngth
	110	66.	. 972	2521	0172.	30.	102.5	1 1	L72.3	0.102.	11	TCP		54
	137	79.	. 295	5175	0 172.	30.	102.1	1 :	L72.3	0.102.	51	TCP		66
	138	79.	. 295	5235	0 172.	30.	102.5	1 :	L72.3	0.102.	.11	TCP		66
	139	79.	. 296	5072	0 172.	30.:	102.1	1 :	L72.30	0.102.	51	TCP		60
	140	79.	. 296	5082	0 172.	30.	102.1	1 :	172.30	0.102.	51	НТТР		249
	141	79	. 296	5568	0 172.	30.	102.5	1 :	172.3	0.102.	.11	HTTP		729
	142	79.	. 298	3144	0172.	30.:	102.1	1 :	L72.30	0.102.	51	TCP		60
	181	10	5.19	5464	8 172.	30.	102.1	1 :	172.3	0.102.	51	TCP		66
	182	10	5.15	5470	5 172.	30.	102.5	1 :	172.3	0.102.	.11	TCP		66
	183	10	5.19	5578	9 172.	30.:	102.1	1 :	L72.3	0.102.	51	TCP		60
	184	10	5.19	5943	0 172.	30.	102.1	1 1	172.30	0.102.	51	нттр		884
	188	10	5.36	5282	0172.	30.	102.5	1 :	172.3	0.102.	.11	TCP		54
	237	10	5.85	5002	0 172.	30.	102.5	1 :	L72.3	0.102.	.11	TCP		2974
	238	10	5.85	5180	4 172.	30.	102.1	1 :	172.3	0.102.	51	TCP		60
	239	10	5.85	5182	7 172.	30.	102.5	1 1	172.3	0.102.	11	HTTP		2937

Figure 5

```
Frame 239: 2937 bytes on wire (23496 bits), 2937 bytes captured (23496 bits) on interface 0

Ethernet II, Src: Vmware_80:6c:83 (00:50:56:80:6c:83), Dst: Vmware_80:70:d9 (00:50:56:80:70:d9)

Internet Protocol Version 4, Src: 172.30.102.51 (172.30.102.51), Dst: 172.30.102.11 (172.30.102.11)

Transmission Control Protocol, Src Port: http (80), Dst Port: 55080 (55080), Seq: 2921, Ack: 831, Len: 2883

[2 Reassembled TCP Segments (5803 bytes): #237(2920), #239(2883)]

Hypertext Transfer Protocol

HTTP/1.1 200 ok\r\n

Cache-Control: private\r\n

Content-Type: text/html; charset=utf-8\r\n

Content-Encoding: gzip\r\n

Vary: Accept-Encoding\r\n

Server: Microsoft-IIS/7.5\r\n

X-AspNet-Version: 4.0.30319\r\n

Set-Cookie: ncMJBtest=Name=imamjbcookietest; expires=Fri, 26-Jul-2013 15:45:56 GMT; path=/\r\n

X-Powered-By: ASP.NET\r\n

Date: Fri, 26 Jul 2013 15:43:56 GMT\r\n

Content-Length: 5443\r\n

\r\n

Content-encoded entity body (gzip): 5443 bytes -> 14940 bytes

Line-based text data: text/html
```

Figure 6

## Data, as seen from the perspective of the 1000v, before leaving "wire" to F5

T [7]	est2_	befo	re_go	oing_	on_wire	_to_l	5.pc	apng	[Wir	eshark	1.8.1	L (SVI	N Re	v 439	946 fr	om /tr	unk-	1.8)]
<u>F</u> ile	<u>E</u> d	it <u>\</u>	<u>/</u> iew	<u>G</u> o	<u>C</u> apti	ure	<u>A</u> nal	yze	Statis	tics	Telep	hony	<u> I</u>	ools	<u>I</u> nte	rnals	<u>H</u> elp	p
			<b>M</b>				×	Z		Q	<b>\( </b>			否	\$			⊕ ∈
Filte	er: i	p.add	lr==1	72.30	.102.11										-	Expres	sion.	Clear
No.		Tim	ie		Sour	ce				De	stinat	ion				Proto	col	Length :
	3	3 2.	5039	9080	0 172	.30	.102	.11		17	72.3	0.10	)2.5	51		TCP		66
	6	2.	5051	L000	0 172	.30	.102	. 51		17	72.3	0.10	)2.1	l1		TCP		66
					0 172							0.10				TCP		60
	8	3 2.	5061	L610	0 172	. 30	.102	.11		17	72.3	0.10	)2.5	51		HTT	Р	249
					0 172							0.10				HTT	Р	729
	10	2.	5081	L460	0 172	. 30	.102	.11		17	72.3	0.10	)2.5	51		TCP		60
					0 172							0.10				TCP		60
					6 172							0.10				TCP		60
					7:172							0.10				TCP		66
					6 172							0.10				TCP		66
					4:172							0.10				TCP		60
					6 172							0.10				HTT	Р	249
					4 172							0.10				HTT	Р	729
					5 172							0.10				TCP		60
					6 172							0.10				TCP		66
	146	17	2.13	3650	8 172	. 30	.102	. 51		17	72.3	0.10	)2.1	l1		TCP		66
	147	17	2.13	3750	0 172	. 30	.102	.11		17	72.3	0.10	)2.5	51		TCP		60
	148	3 17	2.14	4114	3:172	. 30	.102	.11		17	72.3	0.10	)2.5	51		HTT	Р	884
	150	17	2.34	4461	9 172	. 30	.102	. 51		17	72.3	0.10	)2.1	l1		TCP		60
	152	17	2.83	3182	8 172	.30	.102	. 51				0.10				TCP		1514
					1/172							0.10				TCP		1514
					9 172							0.10				TCP		60
					9 172							0.10				TCP		1514
	156	17	2.8	3361	1 172	. 30	. 102	. 51		17	72.3	0.10	)2.1	11		HTT	Р	1477

Figure 7

```
⊞ Internet Protocol Version 4, Src: 172.30.102.51 (172.30.102.51), Dst: 172.30.102.11 (172.30.102.11)
🗄 Transmission Control Protocol, Src Port: http (80), Dst Port: 55080 (55080), Seq: 4381, Ack: 831, Len: 1423

⊞ [4 Reassembled TCP Segments (5803 bytes): #152(1460), #153(1460), #155(1460), #156(1423)]

    ∃ Hypertext Transfer Protocol

 Cache-Control: private\r\n
Content-Type: text/html; charset=utf-8\r\n
   Content-Encoding: gzip\r\n
   Vary: Accept-Encoding\r\n
   Server: Microsoft-IIS/7.5\r\n
   X-AspNet-Version: 4.0.30319\r\n
   Set-Cookie: ncMJBtest=Name=imamjbcookietest; expires=Fri, 26-Jul-2013 15:45:56 GMT; path=/\r
   X-Powered-By: ASP.NET\r\n
   Date: Fri, 26 Jul 2013 15:43:56 GMT\r\n

    ⊕ Content-Length: 5443\r\n

   \r\n
   Content-encoded entity body (gzip): 5443 bytes -> 14940 bytes

    ⊕ Line-based text data: text/html
```

Figure 8

## Data hitting F5's inside interface (from F5's perspective)

ZJ T	est 2-f 5 intfloat-iis.pca	p [Wireshark 1.8.1	(SVN Rev 43946 from /trunk-1.8	3)]	
<u>F</u> ile	<u>E</u> dit <u>V</u> iew <u>G</u> o	<u>C</u> apture <u>A</u> nalyze	Statistics Telephony Tools	<u>I</u> nternals <u>H</u> elp	)
			占   🔍 👄 📦 📦 7	4   1	⊕ (
Filte	er: ip.addr==172.30.1	102.11		Expression.	Clear
No.	Time	Source	Destination	Protocol	Length
	2 11.860012	172.30.102.11	172.30.102.51	TCP	193
	3 11.861140	172.30.102.51	172.30.102.11	TCP	193
	4 11.861174	172.30.102.11	172.30.102.51	TCP	181
	5 11.861186	172.30.102.11	172.30.102.51	HTTP	1011
	6 12.068913	172.30.102.51	172.30.102.11	TCP	181
	7 12.557114	172.30.102.51	172.30.102.11	TCP	1641
	8 12.557122	172.30.102.51	172.30.102.11	TCP	1641
	9 12.557193	172.30.102.11	172.30.102.51	TCP	181
	10 12.558046	172.30.102.51	172.30.102.11	TCP	1641
	11 12.558051	172.30.102.51	172.30.102.11	НТТР	1604

Figure 9

Figure 10

# **TEST 3: F5 and IIS Not Co-resident - Everything Works Fine**

## Data Leaving IIS before hitting wire (from IIS's perspective)

T [M	est3_be	fore_le	aving_	iis_onto_	wire.po	apng	[Wiresha	k 1.8.1	(SVN	Rev 43	946 from /tr	runk-1.	8)]
<u>F</u> ile	<u>E</u> dit	<u>V</u> iew	<u>G</u> o	<u>C</u> apture	<u>A</u> na	lyze	<u>S</u> tatistics	Telep	hon <u>y</u>	<u>T</u> ools	<u>I</u> nternals	<u>H</u> elp	
		# <b>@</b>			×	Z		<b>\( \rightarrow</b>		7	4   ■		⊕ ∈
Filte	er: ip.a	ddr==1	172.30.	102.11							Expres	ssion	Clear
No.	Ti	ime		Source			D	estinati	ion		Proto	col L	ength
	39 2	5.11	34370	172.3	0.10	2.11	. 1	72.30	0.102	. 51	TCP		66
	40 2	5.11	35170	172.3	0.10	2.51	. 1	72.30	0.102	.11	TCP		66
	41 2	5.114	48280	172.3	0.10	2.11	. 1	72.30	0.102	. 51	TCP		60
	42 2	5.114	48310	172.3	0.10	2.11	. 1	72.30	0.102	. 51	HTT	Р	884
	76 2	5.314	4943(	172.3	0.10	2.51	. 1	72.30	0.102	.11	TCP		54
	84 2	5.32	39900	172.3	0.10	2.51	. 1	72.30	0.102	.11	TCP		2974
	85 2	5.324	48330	172.3	0.10	2.11	. 1	72.30	0.102	. 51	TCP		60
	86 2	5.324	48670	172.3	0.10	2.51	. 1	72.30	0.102	.11	HTT	P	2937
	87 2	5.32	5711(	172.3	0.10	2.11	. 1	72.30	0.102	. 51	TCP		60
	142 6	1.23	35900	172.3	0.10	2.11	. 1	72.30	0.102	. 51	HTT	Р	950
	149 6	1.26	29540	172.3	0.10	2.51	. 1	72.30	0.102	.11	HTT	Р	5857

Figure 11

```
m Frame 149: 5857 bytes on wire (46856 bits), 5857 bytes captured (46856 bits) on interface

■ Ethernet II, Src: Vmware_80:6c:83 (00:50:56:80:6c:83), Dst: Vmware_80:70:d9 (00:50:56:80:70:d9)

⊞ Internet Protocol Version 4, Src: 172.30.102.51 (172.30.102.51), Dst: 172.30.102.11 (172.30.102.11)

⊞ Transmission Control Protocol, Src Port: http (80), Dst Port: 55300 (55300), Seq: 5804, Ack: 1727, Len: 5803
∃ Hypertext Transfer Protocol

    HTTP/1.1 200 OK\r\n

               Cache-Control: private\r\n
               Content-Type: text/html; charset=utf-8\r\n
               Content-Encoding: gzip\r\n
               Vary: Accept-Encoding\r\n
               Server: Microsoft-IIS/7.5\r\n
               X-AspNet-Version: 4.0.30319\r\n
               Set-Cookie: ncMJBtest=Name=imamjbcookietest; expires=Fri, 26-Jul-2013 15:57:45 GMT; path=/\r\normalfont{ncm}{r} in the path of the path 
               X-Powered-By: ASP.NET\r\n
               Date: Fri, 26 Jul 2013 15:55:45 GMT\r\n

    ⊕ Content-Length: 5443\r\n

Content-encoded entity body (gzip): 5443 bytes -> 14940 bytes 
Line-based text data: text/html
```

Figure 12

## Data, as seen from the perspective of the 1000v, before leaving wire to F5

I I	est3_b	oefore_g	oing_o	nto_the_w	ire_to_	F5.pc	capng [\	Viresha	ark 1.8.1	(SVN F	Rev 43946 fr	om /tr	unk-1.8)
<u>F</u> ile	<u>E</u> dit	<u>V</u> iew	<u>G</u> o	<u>C</u> apture	<u>A</u> naly	ze	<u>S</u> tatistics	Tele	phony	Tools	<u>I</u> nternals	<u>H</u> elp	
		<b>a 8</b>			×	Z	<b>4</b>   ©	<b>\</b>		<b>》</b>	4   ■		⊕ (
Filte	er: ip	.addr==:	172.30.1	102.11							Expres	sion	Clear
No.		Time		Source				Destina	ation		Proto	col L	ength
	18	20.34	60180	172.30	.102	. 11		172.	30.10	2.51	TCP		66
	19	20.34	62820	172.30	.102	. 51		172.	30.10	2.11	TCP		66
	20	20.34	74220	172.30	.102	. 11		172.	30.10	2.51	TCP		60
	21	20.34	74240	172.30	.102	. 11		172.	30.10	2.51	HTT	Р	884
	22	20.54	77000	172.30	.102	. 51		172.	30.10	2.11	TCP		60
	23	20.55	67580	172.30	.102	. 51		172.	30.10	2.11	TCP		1514
	24	20.55	67670	172.30	.102	. 51		172.	30.10	2.11	TCP		1514
	25	20.55	74480	172.30	.102	.11		172.	30.10	2.51	TCP		60
	26	20.55	76080	172.30	.102	. 51		172.	30.10	2.11	TCP		1514
	27	20.55	76110	172.30	.102	. 51		172.	30.10	2.11	HTT	Р	1477

Figure 13

```
⊕ Ethernet II, Src: Vmware_80:6c:83 (00:50:56:80:6c:83), Dst: Vmware_80:70:d9 (00:50:56:80:70:d9)
⊞ Internet Protocol Version 4, Src: 172.30.102.51 (172.30.102.51), Dst: 172.30.102.11 (172.30.102.11)
⊞ Transmission Control Protocol, Src Port: http (80), Dst Port: 55300 (55300), Seq: 4381, Ack: 831, Len: 1423

    ⊕ [4 Reassembled TCP Segments (5803 bytes): #23(1460), #24(1460), #26(1460), #27(1423)]
    ⊜ Hypertext Transfer Protocol

  Cache-Control: private\r\n
    Content-Type: text/html; charset=utf-8\r\n
    Content-Encoding: gzip\r\n
    Vary: Accept-Encoding\r\n
    Server: Microsoft-IIS/7.5\r\n
    X-AspNet-Version: 4.0.30319\r\n
    Set-Cookie: ncMJBtest=Name=imamjbcookietest; expires=Fri, 26-Jul-2013 15:57:09 GMT; path=/\r\n
    X-Powered-By: ASP.NET\r\n
    Date: Fri, 26 Jul 2013 15:55:09 GMT\r\n
  \blacksquare Content-Length: 5443\r\n
    \r\rangle
    Content-encoded entity body (gzip): 5443 bytes -> 14940 bytes
⊕ Line-based text data: text/html
```

Figure 14

#### Data hitting F5's inside interface (from F5's perspective)

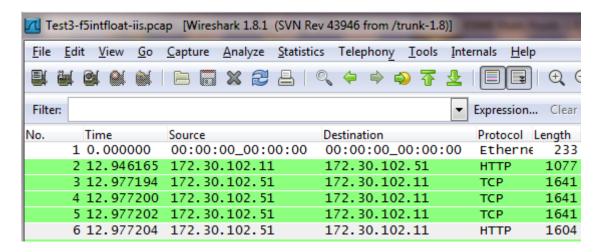


Figure 15

Figure 16