EXHIBIT 55

Subject: Re: Weekly Churn Report 2004/07/08 (oracle)
From: "Chris Dowhan" <chris@direct-revenue.com>
Date: Fri, 9 Jul 2004 15:29:18 -0400 (EDT)
To: "Daniel Doman" <dan@direct-revenue.com>
CC: chris@direct-revenue.com

Below is the path that we were following. I just spoke with Constantine to fast-track the "zap" logic as a standalone deliverable, but I think it would be good if you called him to clarify exactly the method or specific code that you want to deploy. In the meantime, we are testing a version repackaged with a different utility.

Obfuscate Executable
Applies to: Poller
Overview
Currently Windows starts the Poller from HKLM\...\Run entry in the registry. Poller and other lifeboats are vulnerable to an attack that scans all files in the Run registry entry for a signature of the lifeboat. There can be two ways to address this vulnerability – one is to vary the place where we start the Poller, the other – to vary the Poller signature itself. This chapter describes the second approach.

We can think of several ways to create a signature of an executable:
1. Checksum of the whole executable module.
2. Checksum of the executable without the resources.
3. Checksum of just the code section of the executable module.
4. Checksum of just the non-paged working set of the executable module.
5. Branding information.
6. Checksum of a specific resource.
7. A sufficiently large code snippet of the executable.

This shield will deal with all attacks except for the last one (7).
Tasks
- BakePoller Utility that simplifies management and application of about a 100 sufficiently different branding variants to all variants of the Poller. ResHacker can be used as a stop-gap measure, but it requires too much manual labor.
Addresses threats 1 and 6.
- Bake-time code substitution:
o Add a small, but sufficiently unique dummy function to the Poller. This function does nothing but return an integer. About 100 assembler commands.
o Create about a 100 substantially different code snippets that are functions returning different integers.
o Periodically call the dummy function from the Poller. This will make sure the dummy function is loaded into the working set.
o Add dummy function's return value to Poller's USER-AGENT.
o Allow the BakePoller utility to replace all occurrences of the dummy function in the executable by specified code snippets.
Addresses threats 1-4.
Random DES key to encrypt the configuration XML. (Depends on "Obfuscate Configuration XML" above).
Addresses threats 1 and 6.
BakePoller Utility
I recommend C# and .NET unless it is hard to change resources in .NET. We need to first create a simple .NET program that can write the version resource; possibly using class System.Diagnostics.FileVersionInfo and namespace System.Resources.

The configuration file (XML?) for this utility should specify
- PollerEXE – location of the original Poller executable.
- ConfigFolder – folder containing configuration XMLs.
- BrandingFolder – folder containing various brandings (version resources). The format of these files should be human-readable, such as XML. I do not remember whether "res" and "rc" formats are human-readable.
- CodeVariantFolder – folder containing code snippets. Each code snippet's file name is just a number with some extension (for example ".code"). The number should be the return value of the snippet function.
- Internal parameters, such as names of temporary files/folders or the BAT file that calls the compression utility.

The BakePoller utility should open a dialog box with:
- Label "Select Poller configuration" and a drop-down box with names of all XMLs in the ConfigFolder sorted alphabetically.
- Label "Select Branding" and a drop-down box with version and description of all version resources in the ConfigFolder sorted numerically by version number. For example
1.2.0.4 – See www.freephone.com for details
should go before
1.15.0.4 – Book your next trip at www.russianbabes.com
- Label "Select Code Variant" and a drop-down box with the numbers from the snippet file names sorted in numeric order (9 comes before 10).
- Label "Select startup method" and a drop-down box with startup methods. The list of startup methods will depend on the result of the "Alternative Startup Strategies" research above.
- Buttons "Bake" and "Exit". Note that "Bake" must parse the XML being baked into the Poller, and if the parser errors out we should show a message box with error description and line number. The XML should be encrypted using a random DES key and the default key inside the Poller should be replaced by this new key.

The BrandBuilder utility should allow creation of branding variants and editing of existing branding files. If we use XML or another common format we may be able to use an existing editor rather than write our own utility. If we do write this utility it should always store a branding variant in the file whose name consists of the version number. Show the list of files in the BrandingFolder folder and have buttons "Edit", "New", "Copy" and "Delete". The "Edit" button opens a modal dialog with the Version Resource fields; the version number will be read-only. "Copy" will ask for the new version number.

> we need to talk..
>
> How fast can we generate a new poller footprint?
>
> dan
>
> On Jul 9, 2004, at 11:54 AM, Chris Dowhan wrote:
>
> > Well, I get good news and bad news from this report:
> > Good news: I think it took more than 2 weeks for the Antivirus apps to identify Poller (which was our original estimate).
> > Bad News: We thought that by clearly branding Poller that they wouldn't have a problem with it, and that's not the case.
> >
> > 2 major Anitvirus apps (McAffee and AVG) are autodeleting Poller now, and
> > Norton identifies it but doesn't autodelete. That identification may

turn
out to be almost as bad as autodeletion because based on the report
below
(which shows significant loss of our Poller Recovery Disable), people
must
be deletting it manually when presented with the option. Typical
installs
run a full system scan every Friday at 5pm, and I'm guessing we get
whacked when users choose what to delete.

Week over Week Checkin report

The following is the week over week numbers for users born on
2004-07-01
DAY8_CNT how many users were born on 2004-07-01
DAY1_CNT how many of the same users checked in on 2004-07-08

DAY8_CNT	DAY1_CNT	PERC
171002	49679	29.05

DIST_ID	PARTNER	DAY1_CNT	DAY8_CNT	PERC
BDLE4012	MindSet	54	918	5.88
BLANK	Unknown	3482	19983	17.42
BDL14108	ICMD	2669	14908	17.90
POL14100	test	973	5153	18.88
BADTT2001	Unknown	221	1071	20.63
BDL14185	Wild Media	327	1477	22.14
THNALL1T	UPGRADE	4938	20911	23.61
BDL14173	Integrated Search	8057	30341	26.55
MSI89112	MindSet	361	1222	29.54
MSIK9112	MindSet	818	2685	30.47
BDL14125	CDT-INC	168	529	31.76
BDL14025	CDT-INC	8264	25293	32.67
BDL34125	CDT-INC	244	739	33.02
BDL14122	FlyingCroc	2553	7706	33.13
MSV4101	UPGRADE	252	738	34.15
UPDALL1M	Unknown	554	1558	35.56
UPDALL2M	Unknown	1253	3145	39.84
MSIS9112	MindSet	263	644	40.84
MSI69112	MindSet	872	2026	43.04
BDLL4012	MindSet	1264	2887	43.78
MSID9112	MindSet	475	1075	44.19
MSIU9112	MindSet	595	1327	44.84
BDLG4012	MindSet	307	603	50.91
MSIO9112	MindSet	504	988	51.01
FIXI9105	MaxW	3210	5867	54.71
FON14006	Ad.com	1382	2428	56.92
LOT64106	Ad.com	769	1349	57.01
LOT34006	Ad.com	647	1066	60.69

28 rows selected.

The following is the week over week checkins for users born before
2004-07-01

DAY8_CNT how many users checked in on 2004-07-01

DAY1_CNT how many of the same users checked in on 2004-07-08

DAY8_CNT	DAY1_CNT	PERC	AVG_AGE
4625766	2975835	64.33	97.27

APP_NAME	DAY1_CNT	DAY8_CNT	PERC	AVG_AGE
MSView	35124	64634	54.34	375.82
TPS108	3488	6297	55.39	832.37
VX2	9304	16755	55.53	914.38
mxtarget.dll	476179	785384	60.63	53.96
twaintec.dll	1502373	2360786	63.64	71.10
BI.DLL	894956	1313030	68.16	131.73
HOST.DLL	54411	78880	68.98	301.41

7 rows selected.

DIST_ID	PARTNER	DAY1_CNT	DAY8_CNT	PERC	AVG_AGE
BDL14125	CDT-INC	4409	9320	47.31	13.20
UPDALL3M	Unknown	8630	17002	50.76	82.26
BDL14108	ICMD	30538	59163	51.62	36.53
BLANK	Unknown	59195	113964	51.94	42.44
BDLC4126	Standard Internet	5268	10059	52.37	28.72
LEC7001	LEC Dialer	25562	48265	52.96	398.97
AUDIOC3001	Audio Galaxy	6279	11739	53.49	891.32
ROOSTTD3001	Digital Rooster	717	1328	53.99	565.62
ROOSTER3001	Digital Rooster	682	1258	54.21	597.51
BDLJ4126	Standard Internet	1208	2200	54.91	11.09
MSIQ9112	MindSet	6825	12094	56.43	71.84
ROOSTRS3002	Digital Rooster	969	1714	56.53	546.74
THNALL1T	UPGRADE	208212	365699	56.94	23.76
BDL14185	Wild Media	15449	26918	57.39	24.09
BDLK4012	MindSet	862	1501	57.43	42.65
BADTT2001	Unknown	7223	12491	57.83	16.97
NOSTALG7001	MindSet	7672	13260	57.86	296.39
BDL34125	CDT-INC	80667	139265	57.92	24.22
FON19113	Grokster	7450	12816	58.13	102.45
BDL14177	SKYHORN	1327	2248	59.03	31.50
MSII9112	MindSet	6150	10300	59.71	140.65
BDL24126	Standard Internet	56243	94147	59.74	100.24
TURB8108	ICMD	4521	7537	59.98	271.96
BDL14R25	CDT-INC	1178	1963	60.01	50.31
BDL14173	Integrated Search	204841	341013	60.07	27.82
BDL19122	FlyingCroc	44971	74836	60.09	148.40
BDL94126	Standard Internet	32251	53656	60.11	57.94
BDL14122	FlyingCroc	106058	175154	60.55	42.40
BLNK2001	UPGRADE	6654	10957	60.73	21.51
BDL19117	Bundleware	659	1085	60.74	238.18
UPDALL1M	Unknown	10127	16655	60.80	54.51
C30050ctav	Octav	1378	2264	60.87	#######
TUR39126	Standard Internet	2777	4527	61.34	92.82
BDL54126	Standard Internet	1563	2518	62.07	87.64
JEN14108	ICMD	1127	1813	62.16	111.08
MSIR9112	MindSet	4286	6878	62.31	52.83
JEN24180	SIMPLE INTERNET	864	1386	62.34	31.23

BDL74126	Standard Internet	20120	32249	62.39	53.87
POL14100	test	24049	38545	62.39	38.21
BDL14025	CDT-INC	254131	406260	62.55	38.60
MSIB9112	MindSet	40580	64840	62.58	98.00
D3000imesh	Imesh	636	1016	62.60	975.08
BDL14180	SIMPLE INTERNET	1094	1741	62.84	22.21
MSI39112	MindSet	3715	5912	62.84	108.73
BDLM4012	MindSet	1825	2895	63.04	26.44
BDLH4012	MindSet	1470	2325	63.23	63.69
MSIG9112	MindSet	8688	13717	63.34	118.12
UPDALL2M	Unknown	22189	34997	63.40	63.79
BDL44126	Standard Internet	17526	27640	63.41	103.45
MSIP9112	MindSet	7066	11106	63.62	104.27
BDL64126	Standard Internet	23180	36403	63.68	57.99
FON19119	Argonaut	9279	14568	63.69	181.19
MESH4101	UPGRADE	6723	10541	63.78	263.53
MSIH9112	MindSet	57755	90515	63.81	111.16
BDLA4012	MindSet	35553	55812	64.28	62.55
BADBI2001	Unknown	1636	2542	64.36	41.26
BDL14112	MindSet	10710	16623	64.43	103.03
MSI89112	MindSet	2850	4417	64.52	120.24
MSI99112	MindSet	13758	21231	64.80	176.77
NEON4101	UPGRADE	2107	3249	64.85	241.75
FON34183	MEDIA WHIZ	1286	1983	64.85	29.52
BDL14026	Standard Internet	11019	16980	64.89	121.83
MSIF9112	MindSet	8033	12312	65.25	89.97
TURB8106	Ad.com	8672	13267	65.37	326.46
LC505953	LEC Dialer	760	1162	65.40	124.48
CDT19125	CDT-INC	115000	175547	65.51	124.50
GROK4101	UPGRADE	3823	5820	65.69	235.71
GEN4101	UPGRADE	9527	14492	65.74	259.98
MSV4101	UPGRADE	88647	134609	65.86	293.43
MSIL9112	MindSet	5445	8243	66.06	86.92
ASH19108	ICMD	1040	1574	66.07	250.18
MSIT9112	MindSet	2597	3905	66.50	98.08
KMG24126	Standard Internet	720	1081	66.60	67.24
BDL24123	Blubster	994	1489	66.76	33.56
MSIN9112	MindSet	6210	9290	66.85	65.23
JEN14175	Protected Media	1092	1626	67.16	30.26
JEN14163	CLUB JENNA	889	1318	67.45	40.85
BDLI4012	MindSet	1824	2700	67.56	59.65
JEN14184	CYDOOR2	1677	2482	67.57	15.77
MSIS9112	MindSet	16940	25046	67.64	82.14
MVRC2001	UPGRADE	8479	12506	67.80	253.45
MSIO9112	MindSet	6616	9755	67.82	70.74
BDLJ4012	MindSet	5144	7581	67.85	39.09
MPB18106	Ad.com	892	1312	67.99	314.71
BDLJ9123	Blubster	10880	15998	68.01	134.24
BDLD4126	Standard Internet	12436	18275	68.05	88.88
BDLE4012	MindSet	5879	8634	68.09	85.67
MSIM9112	MindSet	10412	15261	68.23	90.89
BDLD4012	MindSet	5361	7854	68.26	60.47
MSIJ9112	MindSet	6669	9748	68.41	101.83
MSIC9112	MindSet	13608	19869	68.49	171.56
MSI69112	MindSet	61934	90289	68.60	117.36
BDLB4012	MindSet	5908	8606	68.65	102.55
MSIU9112	MindSet	34387	49951	68.84	87.11
MSI29112	MindSet	9053	13142	68.89	137.79
MSI59112	MindSet	5608	8140	68.89	92.72
BDLL4012	MindSet	43074	62449	68.97	33.20

BDLG4012	MindSet	11550	16706	69.14	53.19
BDL84126	Standard Internet	41098	59410	69.18	35.80
MPB18105	MaxW	1062	1535	69.19	316.74
FON14152	ADTEGRITY	7152	10315	69.34	172.48
MSI79112	MindSet	12613	18091	69.72	147.04
MSIA9112	MindSet	13846	19813	69.88	146.54
BDL14151	MyGeek	2618	3745	69.91	190.30
SYND4101	UPGRADE	42339	60487	70.00	314.51
STOP8105	MaxW	2564	3661	70.04	359.66
BIRC2001	UPGRADE	118213	168311	70.23	106.49
MSI19112	MindSet	8559	12167	70.35	150.26
BDLF4012	MindSet	36610	51971	70.44	57.07
TUR28102	24/7	2113	2999	70.46	327.59
MSIK9112	MindSet	34323	48672	70.52	107.48
TTRC2001	UPGRADE	47437	67259	70.53	44.22
FON29126	Standard Internet	5879	8323	70.64	126.34
CGA18105	MaxW	1145	1611	71.07	317.17
MPB38106	Ad.com	6208	8673	71.58	136.62
TURB8105	MaxW	8802	12290	71.62	341.01
FON24168	ADVELOCITY	836	1167	71.64	93.84
MSI49112	MindSet	21779	30386	71.67	142.61
MSID9112	MindSet	15026	20956	71.70	55.20
TURB8102	24/7	2060	2864	71.93	327.58
MSIE9112	MindSet	6000	8327	72.05	97.47
BADBI4101	UPGRADE	4089	5665	72.18	68.70
CGA38106	Ad.com	3008	4163	72.26	253.00
FON34168	ADVELOCITY	13942	19206	72.59	47.52
SS4J8105	MaxW	1473	2025	72.74	355.82
TUR38106	Ad.com	4007	5507	72.76	268.27
MPB29126	Standard Internet	2787	3827	72.82	82.95
AST14126	Standard Internet	1056	1440	73.33	46.13
ASH29126	Standard Internet	909	1239	73.37	170.49
TUR29126	Standard Internet	954	1288	74.07	119.63
VAL94006	Ad.com	7217	9738	74.11	79.99
FIX19105	MaxW	171599	230885	74.32	116.20
FON29106	Ad.com	6790	9116	74.48	142.34
TURB9106	Ad.com	1200	1608	74.63	198.52
HSRC2001	UPGRADE	9522	12745	74.71	241.64
FON39120	ExitExchange	19337	25865	74.76	275.24
FON14178	24/7 - Real Media	913	1220	74.84	54.18
FON19106	Ad.com	81557	108844	74.93	185.41
FON14006	Ad.com	51538	68669	75.05	44.63
LOT34006	Ad.com	23002	30646	75.06	69.00
LOT64106	Ad.com	29335	39048	75.13	54.41
COMP7001	Compete	799	1055	75.73	337.05
TUR14178	24/7 - Real Media	908	1186	76.56	54.50

143 rows selected.