...And You Will Know Us By The Trail Of Our Logs

Malware Research and Analysis Using Log Data

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TakeDownCon, Dallas. May, 18th 2011

Log Analysis Use Cases

- Forensic Malware Investigations
- Detecting Malware
- Comprehensive Understanding of Malicious Software

Example: CVE-2010-3654

- Allows Remote Attackers To Execute Arbitrary Code
- Malicious PDF's seen using this exploit
- Often Generates Similar Event In Windows App Log

3/24/2011 8:16 PM TYPE=Error USER= COMP=XXXXX SORC=Application Error CATG=(0) EVID=1000 MESG=Faulting application acrord32.exe, version 9.3.0.148, faulting module unknown, version 0.0.0.0, fault address 0x6753e2ed.

Example: Gumblar Botnet

- Steals Passwords and/or Installs Rogue AV
- Stolen FTP Credentials Used To Infect Webservers
- Encoded Javascript Injected Into Legit Pages
- P2P Style Infection/Upload Technique

Gumblar FTP Log

Jan 8 06:15:38 x4ilofZ04r pure-ftpd[25107]: (ftpuser@213.171.221.32) [NOTICE] html/Website//administrator/components/com_config/views/application/tmpl/index.html downloaded (44 bytes, 77.42KB/sec)

Jan 8 06:15:44 x4ilofZ04r pure-ftpd[25127]: (ftpuser@213.171.221.32) [NOTICE] html/Website//administrator/components/com_config/views/application/tmpl/index.html uploaded (1175 bytes, 3.72KB/sec)

Jan 8 06:15:50 x4ilofZ04r pure-ftpd[25155]: (ftpuser@213.115.141.21) [NOTICE] html/Website//administrator/components/com_config/views/component/index.html downloaded (44 bytes, 88.24KB/sec)

Jan 8 06:17:38 x4ilofZ04r pure-ftpd[25757]: (ftpuser@88.208.229.173) [NOTICE] html/Website//administrator/components/com_config/views/component/index.html uploaded (1175 bytes, 3.76KB/sec)

Jan 8 06:17:42 x4ilofZ04r pure-ftpd[25789]: (ftpuser@69.59.28.23) [NOTICE] html/Website//administrator/components/com_contact/index.html downloaded (44 bytes, 78.70KB/sec)

Jan 8 06:17:44 x4ilofZ04r pure-ftpd[25812]: (ftpuser@74.208.46.24) [NOTICE] html/Website//administrator/components/com_contact/index.html uploaded (1175 bytes, 8.40KB/sec)

Jan 8 06:18:07 x4ilofZ04r pure-ftpd[25959]: (ftpuser@74.208.166.27) [NOTICE] html/Website//administrator/components/com_contact/elements/index.html downloaded (44 bytes, 86.45KB/sec)

Jan 8 06:18:28 x4ilofZ04r pure-ftpd[26078]: (ftpuser@174.36.185.18) [NOTICE] html/Website//administrator/components/com_contact/elements/index.html uploaded (1175 bytes, 16.46KB/sec)

Jan 8 06:18:54 x4ilofZ04r pure-ftpd[26198]: (ftpuser@91.135.229.250) [NOTICE] html/Website//administrator/components/com_contact/helpers/index.html downloaded (44 bytes, 92.22KB/sec)

Jan 8 06:18:56 x4ilofZ04r pure-ftpd[26215]: (ftpuser@74.208.166.27) [NOTICE] html/Website//administrator/components/com_contact/helpers/index.html uploaded (1175 bytes, 8.44KB/sec)

Jan 8 06:19:43 x4ilofZ04r pure-ftpd[26399]: (ftpuser@88.208.229.24) [NOTICE] html/Website//administrator/components/com_contact/tables/index.html downloaded (44 bytes, 89.88KB/sec)

Example: Zbot In Motion

Dear Prospective Employer,

I applied for your position last week. Could I get an update on my application? Your cooperation will be appreciated in this matter. My resume for your review is http://www.careerbuilder.com/ShareInfo/Resume.aspx?DID=XF69GKN.

Best regards,
Mark Bandol

CareerBuilder Linked To

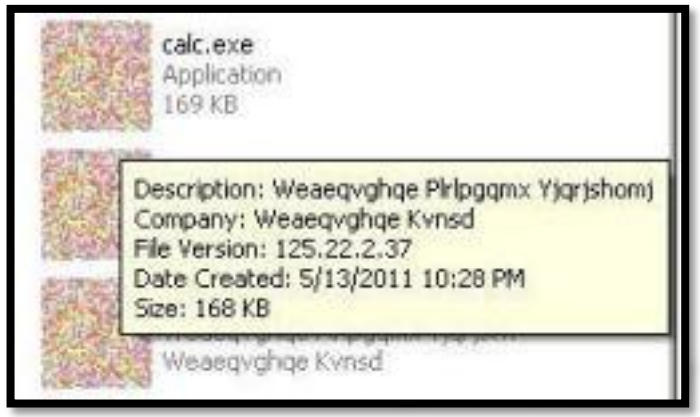
http://payrollserversinstall.com/forum.php?tp=1773b5fa2053528f

Domain Name :
payrollserversinstall.com
Creation Date : 2011-04-18 09:24:17
Updated Date : 2011-04-18 09:24:17
Expiration Date : 2012-04-18 09:24:17
Registrant:
Organization : Liu Jun
Name : liujun
Address : Shang Hai
City : Shang Hai
Province/State : Shanghai
Country : cn
Postal Code : 200085
Administrative
Contact: Name : liujun
Organization : Liu Jun
Address : Shang Hai
City : Shang Hai
Province/State : Shanghai
Country : Shang Hai
Postal Code : 200085
Phone Number : 86-213-2897833
Fax : 86-213-2897833
Email : yazhang2781@hotmail.com

http://payrollserversinstall.com/forum.php?tp=1773b5fa2053528f

Encoded Javascript Downloads And Executes Malicious PDF in the background.

CVE-2007-5659
CVE-2008-2641
CVE-2008-2992
CVE-2009-0927



Malware Log Trail

- Email Server
- Anti-Spam
- IDS/IPS
- AV Logs
- Event Logs
- Router/Firewall
- Proxies
- Authentication Logs (VPN's, DC's)

LogRhythm®

Pro-Active Malicious Log Collection (darknets)

- Routable Network Segment, No Legit Devices
- Honey Potted Network Shares
- ….