

Part I. Russian APT - APT28 collection of samples including OSX XAgent

contagiodump.blogspot.de/2017/02/russian-apt-apt28-collection-of-samples.html



This post is for all of you, Russian malware lovers/haters. Analyze it all to your heart's content. Prove or disprove Russian hacking in general or DNC hacking in particular, or find that "400 lb hacker" or nail another country altogether. You can also have fun and exercise your malware analysis skills without any political agenda.

The post contains malware samples analyzed in the APT28 reports linked below. I will post APT29 and others later.

Read about groups and types of targeted threats here: [Mitre ATT&CK](#)

List of References (and samples mentioned) listed from oldest to newest:

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[Download sets \(matching research listed above\). Email me if you need the password](#)

[Download all files/folders listed \(72MB\)](#)

Sample list

| Parent Folder | File Name (SHA1) |
|---|---|
| APT28 | APT28_2011-09_Telus_Trojan.Win32.Sofacy.A |
| APT28_2011-09_Telus_Trojan.Win32.Sofacy.A | 28F21E96E0722DD6FC7D6E1275F352BD060ADE0D |
| APT28_2011-09_Telus_Trojan.Win32.Sofacy.A | 72CFD996957BDE06A02B0ADB2D66D8AA9C25BF37 |
| APT28_2011-09_Telus_Trojan.Win32.Sofacy.A | AC6B465A13370F87CF57929B7CFD1E45C3694585 |
| APT28_2011-09_Telus_Trojan.Win32.Sofacy.A | C01B02CCC86ACBD9B266B09D2B693CB39A2C6809 |
| APT28 | APT28_2014-08_MhtMS12-27_Prevenity |
| APT28_2014-08_MhtMS12-27_Prevenity | 33EEC0D1AE550FB33874EDCE0138F485538BB21B_.mht_ |
| APT28_2014-08_MhtMS12-27_Prevenity | 8DEF0A554F19134A5DB3D2AE949F9500CE3DD2CE_filee.dll_ |
| APT28_2014-08_MhtMS12-27_Prevenity | A8551397E1F1A2C0148E6EADCB56FA35EE6009CA_coreshell.dll_ |
| APT28_2014-08_MhtMS12-27_Prevenity | E338A57C35A4732BBB5F738E2387C1671A002BCB_advstorshell.dll_ |
| APT28 | APT28_2014-10_Fireeye_A_Window_into_Russia_Cyber_Esp.Operations |
| APT28_2014-10_Fireeye_A_Window_into_Russia_Cyber_Esp.Operations | 367D40465FD1633C435B966FA9B289188AA444BC_tmp64.dat_ |
| APT28_2014-10_Fireeye_A_Window_into_Russia_Cyber_Esp.Operations | 6316258CA5BA2D85134AD7427F24A8A51CE4815B_coreshell.dll_ |
| APT28_2014-10_Fireeye_A_Window_into_Russia_Cyber_Esp.Operations | 682E49EFA6D2549147A21993D64291BFA40D815A_coreshell.dll_ |
| APT28_2014-10_Fireeye_A_Window_into_Russia_Cyber_Esp.Operations | 85522190958C82589FA290C0835805F3D9A2F8D6_coreshell.dll_ |
| APT28_2014-10_Fireeye_A_Window_into_Russia_Cyber_Esp.Operations | A8551397E1F1A2C0148E6EADCB56FA35EE6009CA_coreshell.dll_ |
| APT28_2014-10_Fireeye_A_Window_into_Russia_Cyber_Esp.Operations | CF3220C867B81949D1CE2B36446642DE7894C6DC_coreshell.dll_ |
| APT28_2014-10_Fireeye_A_Window_into_Russia_Cyber_Esp.Operations | D87B310AA81AE6254FFF27B7D57F76035F544073_coreshell.dll_ |
| APT28_2014-10_Fireeye_A_Window_into_Russia_Cyber_Esp.Operations | D9C53ADCE8C35EC3B1E015EC8011078902E6800B_coreshell.dll_ |
| APT28_2014-10_Fireeye_A_Window_into_Russia_Cyber_Esp.Operations | E2450DFFA675C61AA43077B25B12851A910EEEE6_coreshell.dll_ |
| APT28_2014-10_Fireeye_A_Window_into_Russia_Cyber_Esp.Operations | ED48EF531D96E8C7360701DA1C57E2FF13F12405_coreshell.dll_ |
| APT28_2014-10_Fireeye_A_Window_into_Russia_Cyber_Esp.Operations | F5B3E98C6B5D65807DA66D50BD5730D35692174D_asdfasf.dat_ |
| APT28 | APT28_2014-10_Telus_Coreshell.A |
| APT28_2014-10_Telus_Coreshell.A | D87B310AA81AE6254FFF27B7D57F76035F544073_coreshell.dll_ |
| APT28 | APT28_2014-10_TrendMicro Operation Pawn Storm |
| APT28_2014-10_TrendMicro Operation Pawn Storm | 0A3E6607D5E9C59C712106C355962B11DA2902FC_Case2_S.vbs_exe_ |
| APT28_2014-10_TrendMicro Operation Pawn Storm | 0E12C8AB9B89B6EB6BAF16C4B3BBF9530067963F_Case2_Military Coopera |
| APT28_2014-10_TrendMicro Operation Pawn Storm | 14BEEB0FC5C8C887D0435009730B6370BF94BC93_Case5Payload2_netids.c |
| APT28_2014-10_TrendMicro Operation Pawn Storm | 3814EEC8C45FC4313A9C7F65CE882A7899CF0405_Case4_Netlds.dll_ |
| APT28_2014-10_TrendMicro Operation Pawn Storm | 4B8806FE8E0CB49E4AA5D8F87766415A2DB1E9A9_Case2dropper_cryptmor |

| Parent Folder | File Name (SHA1) |
|--|---|
| APT28_2014-10_TrendMicro Operation Pawn Storm | 550ABD71650BAEA05A0071C4E084A803CB413C31_Case2_skype.exe_ |
| APT28_2014-10_TrendMicro Operation Pawn Storm | 55318328511961EC339DFDDCA0443068DCCE9CD2_Case3_conhost.dll_ |
| APT28_2014-10_TrendMicro Operation Pawn Storm | 5A452E7248A8D3745EF53CF2B1F3D7D8479546B9_Case3_netui.dll_keylog |
| APT28_2014-10_TrendMicro Operation Pawn Storm | 6ADA11C71A5176A82A8898680ED1EAA4E79B9BC3_Case1_Letter to IAEA.p |
| APT28_2014-10_TrendMicro Operation Pawn Storm | 6B875661A74C4673AE6EE89ACC5CB6927CA5FD0D_Case2Payload2_netids |
| APT28_2014-10_TrendMicro Operation Pawn Storm | 72CFD996957BDE06A02B0ADB2D66D8AA9C25BF37_Case1_saver.scr_ |
| APT28_2014-10_TrendMicro Operation Pawn Storm | 78D28072FDABF0B5AAC5E8F337DC768D07B63E1E_Case5_IDF_Spokesper |
| APT28_2014-10_TrendMicro Operation Pawn Storm | 7FBB5A2E46FACD3EE0C945F324414210C2199FFB_Case5payload_saver.sc |
| APT28_2014-10_TrendMicro Operation Pawn Storm | 88F7E271E54C127912DB4DB49E37D93AE8A49C9_Case3_download_msmv |
| APT28_2014-10_TrendMicro Operation Pawn Storm | 8DEF0A554F19134A5DB3D2AE949F9500CE3DD2CE_Case6_dropper_filee.dl |
| APT28_2014-10_TrendMicro Operation Pawn Storm | 956D1A36055C903CB570890DA69DEABAACB5A18A_Case2_International Mi |
| APT28_2014-10_TrendMicro Operation Pawn Storm | 9C622B39521183DD71ED2A174031CA159BEB6479_Case3_conhost.dll__ |
| APT28_2014-10_TrendMicro Operation Pawn Storm | A8551397E1F1A2C0148E6EADCB56FA35EE6009CA_Case6_Coreshell.dll_ |
| APT28_2014-10_TrendMicro Operation Pawn Storm | A90921C182CB90807102EF402719EE8060910345_Case4_APEC Media list 2 |
| APT28_2014-10_TrendMicro Operation Pawn Storm | AC6B465A13370F87CF57929B7CFD1E45C3694585_Case4Payload_dw20.t_ |
| APT28_2014-10_TrendMicro Operation Pawn Storm | B3098F99DB1F80E27AEC0C9A5A625AEDAAB5899A_APEC Media list 2013 F |
| APT28_2014-10_TrendMicro Operation Pawn Storm | BC58A8550C53689C8148B021C917FB4AEEC62AC1_Case5Payload_install.e |
| APT28_2014-10_TrendMicro Operation Pawn Storm | C5CE5B7D10ACCB04A4E45C3A4DCF10D16B192E2F_Case1Payload_netids. |
| APT28_2014-10_TrendMicro Operation Pawn Storm | D0AA4F3229FCD9A57E9E4F08860F3CC48C983ADDml.rtf |
| APT28_2014-10_TrendMicro Operation Pawn Storm | DAE7FAA1725DB8192AD711D759B13F8195A18821_Case6_MH17.doc_decoy |
| APT28_2014-10_TrendMicro Operation Pawn Storm | E338A57C35A4732BBB5F738E2387C1671A002BCB_Case6_advstoreshell.dll |
| APT28_2014-10_TrendMicro Operation Pawn Storm | F542C5F9259274D94360013D14FFBECC43AAE552_Case5Decoy_IDF_Spoko |
| APT28_2014-10_TrendMicro Operation Pawn Storm | wp-operation-pawn-storm.pdf |
| APT28 | APT28_2015-07_Digital Attack on German Parliament |
| APT28_2015-07_Digital Attack on German Parliament | 0450AAF8ED309CA6BAF303837701B5B23AAC6F05_servicehost.dll_ |
| APT28_2015-07_Digital Attack on German Parliament | CDEEA936331FCDD8158C876E9D23539F8976C305_exe_ |
| APT28_2015-07_Digital Attack on German Parliament | Digital Attack on German Parliament_ Investigative Report on the Hack of the Le netzpolitik.pdf |
| APT28_2015-07_Digital Attack on German Parliament | F46F84E53263A33E266AAE520CB2C1BD0A73354E_winexesvc.exe_ |
| APT28 | APT28_2015-07_ESET_Sednit_meet_Hacking |
| APT28_2015-07_ESET_Sednit_meet_Hacking | 51B0E3CD6360D50424BF776B3CD673DD45FD0F97.exe_ |
| APT28_2015-07_ESET_Sednit_meet_Hacking | B8B3F53CA2CD64BD101CB59C6553F6289A72D9BBdl_ |
| APT28_2015-07_ESET_Sednit_meet_Hacking | D43FD6579AB8B9C40524CC8E4B7BD05BE6674F6C_warfsgfdydcikf.mkv.swf |
| APT28 | APT28_2015-07_Telus_Trojan-Downloader.Win32.Sofacy.B |
| APT28_2015-07_Telus_Trojan-Downloader.Win32.Sofacy.B | B8B3F53CA2CD64BD101CB59C6553F6289A72D9BB.dll_ |
| APT28 | APT28_2015-09_Root9_APT28_Technical_Followup |
| APT28_2015-09_Root9_APT28_Technical_Followup | 0450AAF8ED309CA6BAF303837701B5B23AAC6F05_servicehost.dll_ |
| APT28_2015-09_Root9_APT28_Technical_Followup | CDEEA936331FCDD8158C876E9D23539F8976C305_exe_ |
| APT28_2015-09_Root9_APT28_Technical_Followup | F46F84E53263A33E266AAE520CB2C1BD0A73354E_winexesvc.exe_ |

| Parent Folder | File Name (SHA1) |
|--|--|
| APT28 | APT28_2015-09_SFecure_Sofacy-recycles-carberp-and-metasploit-code |
| APT28_2015-09_SFecure_Sofacy-recycles-carberp-and-metasploit-code | Dlls |
| Dlls | 21835AAFE6D46840BB697E8B0D4AAC06DEC44F5B |
| Dlls | 3B52046DD7E1D5684EABBD9038B651726714AB69 |
| Dlls | 5C3E709517F41FEBF03109FA9D597F2CCC495956 |
| Dlls | 7319A2751BD13B2364031F1E69035ACFC4FD4D18 |
| Dlls | 9FC43E32C887B7697BF6D6933E9859D29581EAD0 |
| Dlls | AC61A299F81D1CFF4EA857AFD1B323724AAC3F04 |
| Dlls | B8B3F53CA2CD64BD101CB59C6553F6289A72D9BB |
| Dlls | D3AA282B390A5CB29D15A97E0A046305038DBEFE |
| Dlls | D85E44D386315B0258847495BE1711450AC02D9F |
| Dlls | ED9F3E5E889D281437B945993C6C2A80C60FDEDC |
| Dlls | F7608EF62A45822E9300D390064E667028B75DEA |
| APT28_2015-09_SFecure_Sofacy-recycles-carberp-and-metasploit-code | Droppers |
| Droppers | 015425010BD4CF9D511F7FCD0FC17FC17C23EEC1 |
| Droppers | 4FAE67D3988DA117608A7548D9029CADDDBFB3EBF |
| Droppers | 51B0E3CD6360D50424BF776B3CD673DD45FD0F97 |
| Droppers | 63D1D33E7418DAF200DC4660FC9A59492DDD50D9 |
| Droppers | B4A515EF9DE037F18D96B9B0E48271180F5725B7 |
| Droppers | B7788AF2EF073D7B3FB84086496896E7404E625E |
| Droppers | B8AABE12502F7D55AE332905ACEE80A10E3BC399 |
| Droppers | F3D50C1F7D5F322C1A1F9A72FF122CAC990881EE |
| APT28 | APT28_2015-10_New Adobe Flash Zero-Day Used in Pawn Storm |
| APT28_2015-10_New Adobe Flash Zero-Day Used in Pawn Storm | 2DF498F32D8BAD89D0D6D30275C19127763D5568763D5568.swf_ |
| APT28_2015-10_New Adobe Flash Zero-Day Used in Pawn Storm | A5FCA59A2FAE0A12512336CA1B78F857AFC06445AFC06445_mgswizap.dll |
| APT28 | APT28_2015-10_Root9_APT28_targets Financial Markets |
| APT28_2015-10_Root9_APT28_targets Financial Markets | 0450AAF8ED309CA6BAF303837701B5B23AAC6F05_servicehost.dll_ |
| APT28_2015-10_Root9_APT28_targets Financial Markets | F325970FD24BB088F1BEFDAE5788152329E26BF3_SupUpNvidia.exe_ |
| APT28 | APT28_2015-12_Bitdefender_In-depth_analysis_of_APT28â€œThe_Political_Cy |
| APT28_2015-12_Bitdefender_In-depth_analysis_of_APT28â€œThe_Political_Cyber-Espionage | Bitdefender_In-depth_analysis_of_APT28â€œThe_Political_Cyber-Espionage.pdf |
| APT28_2015-12_Bitdefender_In-depth_analysis_of_APT28â€œThe_Political_Cyber-Espionage | CB796F2986700DF9CE7D8F8D7A3F47F2EB4DF682_xp.exe_APT28 |
| APT28_2015-12_Bitdefender_In-depth_analysis_of_APT28â€œThe_Political_Cyber-Espionage | F080E509C988A9578862665B4FCF1E4BF8D77C3E_Linux.Fysbis.A_ksysdefd |
| APT28_2015-12_Bitdefender_In-depth_analysis_of_APT28â€œThe_Political_Cyber-Espionage | SIMILAR |
| SIMILAR | 356d03f6975f443d6db6c5069d778af9_exe_ |
| SIMILAR | 78450806e56b1f224d00455efcd04ce3_xp.exe_APT28 |

| Parent Folder | File Name (SHA1) |
|---|--|
| SIMILAR | e49bce75070a7a3c63a7cebb699342b3_CVE-2014-4076_tan.exe_ |
| APT28 | APT28_2015-12_Kaspersky_Sofacy APT hits high profile targets |
| APT28_2015-12_Kaspersky_Sofacy APT hits high profile targets | 1A4F39C0262822B0623213B8ED3F56DDEE0117CD59_tf394kv.dll_ |
| APT28_2015-12_Kaspersky_Sofacy APT hits high profile targets | 1A4F39C0262822B0623213B8ED3F56DDEE0117CD5_tf394kv.dll_ |
| APT28_2015-12_Kaspersky_Sofacy APT hits high profile targets | 314EF7909CA0ED3A744D2F59AB5AC8B8AE259319.dll_(4.3)AZZYimplants-U |
| APT28_2015-12_Kaspersky_Sofacy APT hits high profile targets | 3E2E245B635B04F006A0044388BD968DF9C3238C_IGFSRVC.dll_USBSteale |
| APT28_2015-12_Kaspersky_Sofacy APT hits high profile targets | 776C04A10BDEEC9C10F51632A589E2C52AABDF48_USBGuard.exe_ |
| APT28_2015-12_Kaspersky_Sofacy APT hits high profile targets | AF86743852CC9DF557B62485715AF4C6D73644D3_AZZY4.3installer |
| APT28_2015-12_Kaspersky_Sofacy APT hits high profile targets | C78FCAE030A66F388BF8CEA569422F5A79B7B96C_tmpdt.tmp_(4.3)AZZYim |
| APT28_2015-12_Kaspersky_Sofacy APT hits high profile targets | C78FCAE030A66F388BF8CEA569422F5A79B7B96C_tmpdt.tmp__ |
| APT28_2015-12_Kaspersky_Sofacy APT hits high profile targets | E251B3EB1449F7016DF78D113571BEA57F92FC36c_servicehost.dll_USBSte |
| APT28_2015-12_Kaspersky_Sofacy APT hits high profile targets | E3B7704D4C887B40A9802E0695BAE379358F3BA0_Stand-aloneAZZYbackdc |
| APT28_2015-12_Kaspersky_Sofacy APT hits high profile targets | F325970FD24BB088F1BEFDAE5788152329E26BF3_SupUpNvidia.exe_USBS |
| APT28 | APT28_2015_06_Microsoft_Security_Intelligence_Report_V19 |
| APT28_2015_06_Microsoft_Security_Intelligence_Report_V19 | 0450AAF8ED309CA6BAF303837701B5B23AAC6F05_servicehost.dll_ |
| APT28_2015_06_Microsoft_Security_Intelligence_Report_V19 | 1535D85BEE8A9ADB52E8179AF20983FB0558CCB3.exe_ |
| APT28 | APT28_2016-02_PaloAlto_Fysbis Sofacy Linux Backdoor |
| APT28_2016-02_PaloAlto_Fysbis Sofacy Linux Backdoor | 9444D2B29C6401BC7C2D14F071B11EC9014AE040_Fysbis_elf_ |
| APT28_2016-02_PaloAlto_Fysbis Sofacy Linux Backdoor | A Look Into Fysbis_ Sofacy™s Linux Backdoor - Palo Alto Networks Blog.pdf |
| APT28_2016-02_PaloAlto_Fysbis Sofacy Linux Backdoor | ECDDA7ACA5C805E5BE6E0AB2017592439DE7E32C_ksysdefd_elf |
| APT28_2016-02_PaloAlto_Fysbis Sofacy Linux Backdoor | F080E509C988A9578862665B4FCF1E4BF8D77C3E |
| APT29 | APT29_2016-06_Crowdstrike_Bears in the Midst Intrusion into the Democratic N |
| APT29_2016-06_Crowdstrike_Bears in the Midst Intrusion into the Democratic National Committee | 0B3852AE641DF8ADA629E245747062F889B26659.exe_ |
| APT29_2016-06_Crowdstrike_Bears in the Midst Intrusion into the Democratic National Committee | 74C190CD0C42304720C686D50F8184AC3FADDBE9.exe_ |
| APT29_2016-06_Crowdstrike_Bears in the Midst Intrusion into the Democratic National Committee | Bears in the Midst_ Intrusion into the Democratic National Committee Å».pdf |
| APT29_2016-06_Crowdstrike_Bears in the Midst Intrusion into the Democratic National Committee | CB872EDD1F532C10D0167C99530A65C4D4532A1E.exe_ |
| APT29_2016-06_Crowdstrike_Bears in the Midst Intrusion into the Democratic National Committee | E2B98C594961AAE731B0CCEE5F9607080EC57197_pagemgr.exe_ |
| APT29_2016-06_Crowdstrike_Bears in the Midst Intrusion into the Democratic National Committee | F09780BA9EB7F7426F93126BC198292F5106424B_VmUpgradeHelper.exe_ |
| APT28 | APT28_2016-07_Invincea_Tunnel of Gov DNC Hack and the Russian XTunnel |
| APT28_2016-07_Invincea_Tunnel of Gov DNC Hack and the Russian XTunnel | E2101519714F8A4056A9DE18443BC6E8A1F1B977_PortMapClient.exe_ |

| Parent Folder | File Name (SHA1) |
|---|--|
| APT28_2016-07_Invincea_Tunnel of Gov DNC Hack and the Russian XTunnel | F09780BA9EB7F7426F93126BC198292F5106424B_VmUpgradeHelper.exe_ |
| APT28_2016-07_Invincea_Tunnel of Gov DNC Hack and the Russian XTunnel | Tunnel of Gov_ DNC Hack and the Russian XTunnel _ Invincea.pdf |
| APT28 | APT28_2016-10_ESET_Observing the Comings and Goings |
| APT28_2016-10_ESET_Observing the Comings and Goings | eset-sednit-part-2.pdf |
| APT28_2016-10_ESET_Observing the Comings and Goings | Sedreco-dropper |
| Sedreco-dropper | 4F895DB287062A4EE1A2C5415900B56E2CF15842 |
| Sedreco-dropper | 87F45E82EDD63EF05C41D18AEDDEAC00C49F1AEE |
| Sedreco-dropper | 8EE6CEC34070F20FD8AD4BB202A5B08AEA22ABFA |
| Sedreco-dropper | 9E779C8B68780AC860920FCB4A8E700D97F084EF |
| Sedreco-dropper | C23F18DE9779C4F14A3655823F235F8E221D0F6A |
| Sedreco-dropper | E034E0D9AD069BAB5A6E68C1517C15665ABE67C9 |
| Sedreco-dropper | E17615331BDCE4AFA45E4912BDCC989EACF284BC |
| APT28_2016-10_ESET_Observing the Comings and Goings | Sedreco_payload |
| Sedreco_payload | 04301B59C6EB71DB2F701086B617A98C6E026872 |
| Sedreco_payload | 11AF174294EE970AC7FD177746D23CDC8FFB92D7 |
| Sedreco_payload | E3B7704D4C887B40A9802E0695BAE379358F3BA0 |
| APT28_2016-10_ESET_Observing the Comings and Goings | XAgent-LIN |
| XAgent-LIN | 7E33A52E53E85DDB1DC8DC300E6558735ACF10CE |
| XAgent-LIN | 9444D2B29C6401BC7C2D14F071B11EC9014AE040 |
| XAgent-LIN | ECDDA7ACA5C805E5BE6E0AB2017592439DE7E32C |
| XAgent-LIN | F080E509C988A9578862665B4FCF1E4BF8D77C3E |
| APT28_2016-10_ESET_Observing the Comings and Goings | XAgent-WIN |
| XAgent-WIN | 072933FA35B585511003F36E3885563E1B55D55A |
| XAgent-WIN | 082141F1C24FB49981CC70A9ED50CDA582EE04DD |
| XAgent-WIN | 08C4D755F14FD6DF76EC86DA6EAB1B5574DFBAFD |
| XAgent-WIN | 0F04DAD5194F97BB4F1808DF19196B04B4AEE1B8 |
| XAgent-WIN | 3403519FA3EDE4D07FB4C05D422A9F8C026CEDBF |
| XAgent-WIN | 499FF777C88AEACBBAA47EDDE183C944AC7E91D2 |
| XAgent-WIN | 4B74C90C9D9CE7668AA9EB09978C1D8D4DFDA24A |
| XAgent-WIN | 4BC32A3894F64B4BE931FF20390712B4EC605488 |
| XAgent-WIN | 5F05A8CB6FEF24A91B3BD6C137B23AB3166F39AE |
| XAgent-WIN | 71636E025FA308FC5B8065136F3DD692870CB8A4 |
| XAgent-WIN | 780AA72F0397CB6C2A78536201BD9DB4818FA02A |
| XAgent-WIN | A70ED3AE0BC3521E743191259753BE945972118B |
| XAgent-WIN | BAA4C177A53CFA5CC103296B07B62565E1C7799F |
| XAgent-WIN | C18EDCBA2C31533B7CDB6649A970DCE397F4B13C |
| XAgent-WIN | C2E8C584D5401952AF4F1DB08CF4B6016874DDAC |
| XAgent-WIN | D00AC5498D0735D5AE0DEA42A1F477CF8B8B0826 |

| Parent Folder | File Name (SHA1) |
|---|---|
| XAgent-WIN | D0DB619A7A160949528D46D20FC0151BF9775C32 |
| XAgent-WIN | E816EC78462B5925A1F3EF3CDB3CAC6267222E72 |
| XAgent-WIN | F1EE563D44E2B1020B7A556E080159F64F3FD699 |
| APT28_2016-10_ESET_Observing the Comings and Goings | Xtunnel |
| Xtunnel | 0450AAF8ED309CA6BAF303837701B5B23AAC6F05 |
| Xtunnel | 067913B28840E926BF3B4BFAC95291C9114D3787 |
| Xtunnel | 1535D85BEE8A9ADB52E8179AF20983FB0558CCB3 |
| Xtunnel | 42DEE38929A93DFD45C39045708C57DA15D7586C |
| Xtunnel | 8F4F0EDD5FB3737914180FF28ED0E9CCA25BF4CC |
| Xtunnel | 982D9241147AAACF795174A9DAB0E645CF56B922 |
| Xtunnel | 99B454262DC26B081600E844371982A49D334E5E |
| Xtunnel | C637E01F50F5FBD2160B191F6371C5DE2AC56DE4 |
| Xtunnel | C91B192F4CD47BA0C8E49BE438D035790FF85E70 |
| Xtunnel | CDEEA936331FCDD8158C876E9D23539F8976C305 |
| Xtunnel | DB731119FCA496064F8045061033A5976301770D |
| Xtunnel | DE3946B83411489797232560DB838A802370EA71 |
| Xtunnel | E945DE27EBFD1BAF8E8D2A81F4FB0D4523D85D6A |
| APT28 | APT28_2016-10_ESET_Sednit A Mysterious Downloader |
| APT28_2016-10_ESET_Sednit A Mysterious Downloader | 1CC2B6B208B7687763659AEB5DCB76C5C2FBBF26.scr_ |
| APT28_2016-10_ESET_Sednit A Mysterious Downloader | 49ACBA812894444C634B034962D46F986E0257CF.exe_ |
| APT28_2016-10_ESET_Sednit A Mysterious Downloader | 4C9C7C4FD83EDAF7EC80687A7A957826DE038DD7.exe_ |
| APT28_2016-10_ESET_Sednit A Mysterious Downloader | 4F92D364CE871C1AEBBF3C5D2445C296EF535632.exe_ |
| APT28_2016-10_ESET_Sednit A Mysterious Downloader | 516EC3584073A1C05C0D909B8B6C15ECB10933F1.exe_ |
| APT28_2016-10_ESET_Sednit A Mysterious Downloader | 593D0EB95227E41D299659842395E76B55AA048D.exe_ |
| APT28_2016-10_ESET_Sednit A Mysterious Downloader | 593D0EB95227E41D299659842395E76B55AA048D_dll_ |
| APT28_2016-10_ESET_Sednit A Mysterious Downloader | 5C132AE63E3B41F7B2385740B9109B473856A6A5.dll_ |
| APT28_2016-10_ESET_Sednit A Mysterious Downloader | 5FC4D555CA7E0536D18043977602D421A6FD65F9.exe_ |
| APT28_2016-10_ESET_Sednit A Mysterious Downloader | 669A02E330F5AFC55A3775C4C6959B3F9E9965CF.exe_ |
| APT28_2016-10_ESET_Sednit A Mysterious Downloader | 6CAA48CD9532DA4CABD6994F62B8211AB9672D9E_bk.exe_ |
| APT28_2016-10_ESET_Sednit A Mysterious Downloader | 7394EA20C3D510C938EF83A2D0195B767CD99ED7_x32.dll_ |
| APT28_2016-10_ESET_Sednit A Mysterious Downloader | 9F3AB8779F2B81CAE83F62245AFB124266765939.exe_ |
| APT28_2016-10_ESET_Sednit A Mysterious Downloader | E8ACA4B0CFE509783A34FF908287F98CAB968D9E.exe_ |
| APT28_2016-10_ESET_Sednit A Mysterious Downloader | EE788901CD804965F1CD00A0AFC713C8623430C4.exe_ |
| APT28_2016-10_ESET_Sednit A Mysterious Downloader | EE788901CD804965F1CD00A0AFC713C8623430C46.exe_ |
| APT28_2016-10_ESET_Sednit A Mysterious Downloader | eset-sednit-part3.pdf |
| APT28 | APT28_2016-10_ESET_Sednit Approaching the Target |
| APT28_2016-10_ESET_Sednit Approaching the Target | 015425010BD4CF9D511F7FCD0FC17FC17C23EEC1 |
| APT28_2016-10_ESET_Sednit Approaching the Target | 0F7893E2647A7204DBF4B72E50678545573C3A10 |
| APT28_2016-10_ESET_Sednit Approaching the Target | 10686CC4E46CF3FFBDEB71DD565329A80787C439 |

| Parent Folder | File Name (SHA1) |
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| APT28_2016-10_ESET_Sednit Approaching the Target | 17661A04B4B150A6F70AFDABE3FD9839CC56BEE8 |
| APT28_2016-10_ESET_Sednit Approaching the Target | 21835AAFE6D46840BB697E8B0D4AAC06DEC44F5B |
| APT28_2016-10_ESET_Sednit Approaching the Target | 2663EB655918C598BE1B2231D7C018D8350A0EF9 |
| APT28_2016-10_ESET_Sednit Approaching the Target | 2C86A6D6E9915A7F38D119888EDE60B38AB1D69D |
| APT28_2016-10_ESET_Sednit Approaching the Target | 351C3762BE9948D01034C69ACED97628099A90B0 |
| APT28_2016-10_ESET_Sednit Approaching the Target | 3956CFE34566BA8805F9B1FE0D2639606A404CD4 |
| APT28_2016-10_ESET_Sednit Approaching the Target | 4D5E923351F52A9D5C94EE90E6A00E6FCED733EF |
| APT28_2016-10_ESET_Sednit Approaching the Target | 4FAE67D3988DA117608A7548D9029CADD9BFB3EBF |
| APT28_2016-10_ESET_Sednit Approaching the Target | 51B0E3CD6360D50424BF776B3CD673DD45FD0F97 |
| APT28_2016-10_ESET_Sednit Approaching the Target | 51E42368639D593D0AE2968BD2849DC20735C071 |
| APT28_2016-10_ESET_Sednit Approaching the Target | 5C3E709517F41FEBF03109FA9D597F2CCC495956 |
| APT28_2016-10_ESET_Sednit Approaching the Target | 63D1D33E7418DAF200DC4660FC9A59492DDD50D9 |
| APT28_2016-10_ESET_Sednit Approaching the Target | 69D8CA2A02241A1F88A525617CF18971C99FB63B |
| APT28_2016-10_ESET_Sednit Approaching the Target | 6FB3FD8C2580C84314B14510944700144A9E31DF |
| APT28_2016-10_ESET_Sednit Approaching the Target | 80DCA565807FA69A75A7DD278CEF1DAAEE34236E |
| APT28_2016-10_ESET_Sednit Approaching the Target | 842B0759B5796979877A2BAC82A33500163DED67 |
| APT28_2016-10_ESET_Sednit Approaching the Target | 8F99774926B2E0BF85E5147ACA8BBBCC5F1D48 |
| APT28_2016-10_ESET_Sednit Approaching the Target | 90C3B756B1BB849CBA80994D445E96A9872D0CF5 |
| APT28_2016-10_ESET_Sednit Approaching the Target | 99F927F97838EB47C1D59500EE9155ADB55B806A |
| APT28_2016-10_ESET_Sednit Approaching the Target | 9FC43E32C887B7697BF6D6933E9859D29581EAD0 |
| APT28_2016-10_ESET_Sednit Approaching the Target | A43EF43F3C3DB76A4A9CA8F40F7B2C89888F0399 |
| APT28_2016-10_ESET_Sednit Approaching the Target | A5FCA59A2FAE0A12512336CA1B78F857AFC06445 |
| APT28_2016-10_ESET_Sednit Approaching the Target | A857BCCF4CC5C15B60667ECD865112999E1E56BA |
| APT28_2016-10_ESET_Sednit Approaching the Target | B4A515EF9DE037F18D96B9B0E48271180F5725B7 |
| APT28_2016-10_ESET_Sednit Approaching the Target | B7788AF2EF073D7B3FB84086496896E7404E625E |
| APT28_2016-10_ESET_Sednit Approaching the Target | B8AABE12502F7D55AE332905ACEE80A10E3BC399 |
| APT28_2016-10_ESET_Sednit Approaching the Target | C1EAE93785C9CB917CFB260D3ABF6432C6FDAF4D |
| APT28_2016-10_ESET_Sednit Approaching the Target | C2E8C584D5401952AF4F1DB08CF4B6016874DDAC |
| APT28_2016-10_ESET_Sednit Approaching the Target | C345A85C01360F2833752A253A5094FF421FC839 |
| APT28_2016-10_ESET_Sednit Approaching the Target | D3AA282B390A5CB29D15A97E0A046305038DBEFE |
| APT28_2016-10_ESET_Sednit Approaching the Target | D85E44D386315B0258847495BE1711450AC02D9F |
| APT28_2016-10_ESET_Sednit Approaching the Target | D9989A46D590EBC792F14AA6FEC30560DFE931B1 |
| APT28_2016-10_ESET_Sednit Approaching the Target | E5FB715A1C70402774EE2C518FB0E4E9CD3FDCFF |
| APT28_2016-10_ESET_Sednit Approaching the Target | E742B917D3EF41992E67389CD2FE2AAB0F9ACE5B |
| APT28_2016-10_ESET_Sednit Approaching the Target | ED9F3E5E889D281437B945993C6C2A80C60FDEDC |
| APT28_2016-10_ESET_Sednit Approaching the Target | F024DBAB65198467C2B832DE9724CB70E24AF0DD |
| APT28_2016-10_ESET_Sednit Approaching the Target | F3D50C1F7D5F322C1A1F9A72FF122CAC990881EE |
| APT28_2016-10_ESET_Sednit Approaching the Target | F7608EF62A45822E9300D390064E667028B75DEA |
| APT28_2016-10_ESET_Sednit Approaching the Target | eset-sednit-part1.pdf |

| Parent Folder | File Name (SHA1) |
|--|--|
| APT28 | APT28_2016-10_Sekoia_Rootkit analysisUse case on HideDRV |
| APT28_2016-10_Sekoia_Rootkit analysisUse case on HideDRV | 83E54CB97644DE7084126E702937F8C3A2486A2F_fsflt.sys_ |
| APT28_2016-10_Sekoia_Rootkit analysisUse case on HideDRV | 9F3AB8779F2B81CAE83F62245AFB124266765939_fsflt.1 |
| APT28 | APT28_2017-02_Bitdefender_OSX_XAgent |
| APT28_2017-02_Bitdefender_OSX_XAgent | 70A1C4ED3A09A44A41D54C4FD4B409A5FC3159F6_XAgent_OSX |