

Uncovering the Inner Workings of EyePyramid

Appendix

**TrendLabs Security Intelligence Blog
Forward-Looking Threat Research (FTR) Team**

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Evolution of EyePyramid

The following table lists the various properties of EyePyramid-related samples over years.

Year	# of Samples	C&C/Dropzone Related Strings	Notable Email Addresses	Notable MailBee Keys	Sample Hashes	gmail.it	Env. Info	Eye Pyramid	Spy Works	File Name	Compiler	Protection
2010	1	hxxp://guess515.fastmail.fm/files/conf ig/ hxxp://guess515.fastmail.fm/files/conf ig hxxp://guess515.fastmail.fm/files/bin/ hxxp://guess515.fastmail.fm/files/bin/ ghk hxxp://guess515.fastmail.fm/files/obj/ decepk hxxp://guess515.fastmail.fm/files/bin/ run hxxp://guess515.fastmail.fm/files/repl ace/ hxxp://guess515.fastmail.fm/files/jobs hxxp://guess515.fastmail.fm/files/repl ace hxxp://guess515.fastmail.fm/files/fail hxxp://guess515.fastmail.fm/files/obj hxxp://guess515.fastmail.fm/files/obj/ tasks hxxp://guess515.fastmail.fm/files/bin	tip848[@]gmail .com deliver[@]host penta.com.xml archive[@]host penta.com.xml tim11235[@]g mail.com guess515[@]fas tmail.fm dude626[@]gm ail.com octo424[@]gm ail.com plars575[@]gm ail.com purge626[@]g mail.com	MN600- D8102F401003102 110C5114F1F18- 0E8C	3a451f1e2f64b7f4fe3c4f48366014142 e22093a16b15601e0f98bc27364bd57			\\Work\E yePyram id*		run.exe	2	Skater/ Dotfuscator

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Year	# of Samples	C&C/Dropzone Related Strings	Notable Email Addresses	Notable MailBee Keys	Sample Hashes	gmail.it	Env. Info	Eye Pyramid	Spy Works	File Name	Com piler	Protection
2010	2	hxxp://guess515.fastmail.fm/files/jobs/44dc7eceb2719abfaac5b2c684d05c35 hxxp://guess515.fastmail.fm/files/jobs/3261cc389d6ef8f0a8c6a6212829effd hxxp://guess515.fastmail.fm/files/ghk hxxp://guess515.fastmail.fm/files/configuration/ hxxp://guess515.fastmail.fm/files/tasks hxxp://guess515.fastmail.fm/files/dec epk hxxp://guess515.fastmail.fm/files/repl ace/ hxxp://guess515.fastmail.fm/files/repl ace hxxp://guess515.fastmail.fm/files/jobs hxxp://guess515.fastmail.fm/files/run	purge626[@]go oglemail.com tip848[@]gmail .com tim11235[@]g mail.com guess515[@]fas tmail.fm tim11235[@]go oglemail.com purge626[@]g mail.com octo424[@]gm ail.com plars575[@]gm ail.com dude626[@]gm ail.com	MN600- D8102F401003102 110C5114F1F18- 0E8C	47a157ea41f9b93c956f0d8a78060dc0 44ed415c7bb0f1d8b337428660f60767 cf1594755886e5ff2aa699ede860b9fc2b 9061585624378739907d26d1f916d30					run.exe	2	Skater/ Dotfuscator
2012	1	ftp[:]//ftp1.storegate.com/home/jiwo ku375 hxxps://webdav1.storegate.com/jiwok u375/home/jiwoku375 hxxp://webdav1.storegate.com/jiwoku 375/home/jiwoku375 ftp1[.]storegate.com/home/jiwoku375		MN600- D8102F401003102 110C5114F1F18- 0E8C	4be22645fa65d7dbb173a51ce9ed6509 c600c61df8ed4a131d66d9745a707510					run.exe	2	Skater/ Dotfuscator
2012	2	ftp[:]//ftp1.storegate.com/home/jiwo ku375 hxxps://webdav1.storegate.com/jiwok u375/home/jiwoku375 hxxp://webdav1.storegate.com/jiwoku 375/home/jiwoku375 ftp1.storegate.com/home/jiwoku375		MN600- D8102F401003102 110C5114F1F18- 0E8C	3dcb22f5428d2161167663ccf13ab0ad a0066d05401789daffe64c0cb1398a50 0ed387453442d53d65a5b402243fb8f5 0ae7605196d1bc90595ed0e9c6143f5d			Spy Works	ghk.e xe	2	Skater/ Dotfuscator	
2013	1	ftp[:]//ftp1.storegate.com/home/jiwo ku375 hxxps://webdav1.storegate.com/jiwok u375/home/jiwoku375 hxxp://webdav1.storegate.com/jiwoku 375/home/jiwoku375 ftp1.storegate.com/home/jiwoku375		MN600- D8102F401003102 110C5114F1F18- 0E8C	e17c71a427cf5c9026aac00c6631ba443 8da5f3b52e96655193ededd4ffd00ee				ghk.e xe	3.5	Skater/ Dotfuscator	

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Year	# of Samples	C&C/Dropzone Related Strings	Notable Email Addresses	Notable MailBee Keys	Sample Hashes	gmail.it	Env. Info	Eye Pyramid	Spy Works	File Name	Com piler	Protection
2013	2	ftp[:]//ftp1.storegate.com/home/jiwoku375 hxxps://webdav1.storegate.com/jiwoku375/home/jiwoku375 hxxp://webdav1.storegate.com/jiwoku375/home/jiwoku375 ftp1.storegate.com/home/jiwoku375		MN600-D8102F401003102110C5114F1F18-0E8C	6085e8b4ee1b2977a4513d202ec04dea0ac378f8e8bf914f81e50f85be03fd5676c1519243dbd5d56a59c5f95bdaf5c561759388d8a1395c04c527f8b092	Binary and Source				ghk.exe	3.5	Skater/Dotfuscator
2014	5	hxxps://webdav.hidrive.strato.com/users/oncole3991 hxxp://webdav.hidrive.strato.com/users/oncole3991	almeria.recupero[.]gmail.com mariangelatreglia[.]libero.it avv.angelonimilano[.]tiscali.it cadiz.recupero[.]gmail.com	MN600-D8102F401003102110C5114F1F18-0E8C	7fcae3924409ec5b6338d2eb71dd4644d124b72ffd6995c9252dd477e0041c912a8a15b41d0713db9ddc5ad895cb9a08023d42057d98e0dcd96cfbee80146d8e	Source			ghk.exe	4.5	Skater/Dotfuscator	
2014	2	hxxps://webdav.hidrive.strato.com/users/oncole3991 hxxp://webdav.hidrive.strato.com/users/oncole3991	almeria.recupero[.]gmail.com mariangelatreglia[.]libero.it avv.angelonimilano[.]tiscali.it cadiz.recupero[.]gmail.com	MN600-D8102F401003102110C5114F1F18-0E8C	0af665d7d81871474039f08d96ba067d5a0bd5a95088009ea7344d23a27ca824871e65e7b80b32501b9890a7044dcc64fb1b0936a17d0fa0d50bb10b2550d3d	Source			stkr.exe	4.5	Skater/Dotfuscator	
2014	1	ftp[:]//ftp1.storegate.com/home/jiwoku375 hxxps://webdav1.storegate.com/jiwoku375/home/jiwoku375 hxxp://webdav1.storegate.com/jiwoku375/home/jiwoku375 ftp1.storegate.com/home/jiwoku375		MN600-D8102F401003102110C5114F1F18-0E8C	31ef142400853070edc4261e0b35875fd6e294fd30e56ee1040bca233e3e7234	Binary and Source				run.exe	3.5	Skater/Dotfuscator
2014	1	hxxps://webdav.hidrive.strato.com/users/oncole3991 hxxp://webdav.hidrive.strato.com/users/oncole3991	almeria.recupero[.]gmail.com mariangelatreglia[.]libero.it avv.angelonimilano[.]tiscali.it cadiz.recupero[.]gmail.com	MN600-D8102F401003102110C5114F1F18-0E8C	e2d5512fe82b6e4b6bfdeb93f49adbcc719e833a3e7e56d95f98022e12615f9	Source	:\projects\vs2005*		vmgr.exe	4.5	Skater/Dotfuscator	

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Year	# of Samples	C&C/Dropzone Related Strings	Notable Email Addresses	Notable MailBee Keys	Sample Hashes	gmail.it	Env. Info	Eye Pyramid	Spy Works	File Name	Compiler	Protection
2014	1	hxxps://webdav.hidrive.strato.com/users/oncole3991 hxxp://webdav.hidrive.strato.com/users/oncole3991 hxxp://webdav1.storegate.com/enzevu888/home/enzevu888 hxxps://webdav1.storegate.com/enzevu888/home/enzevu888		MN600-D8102F401003102110C5114F1F18-0E8C	580cf6d6f5ea248f968806605f57e440014661351593b3cf3d4dc5369a594472	Binary and Source				Carrie r.exe	3.5	Skater/ Dotfuscator
2014	148	hxxps://webdav.hidrive.strato.com/users/oncole3991 hxxp://webdav.hidrive.strato.com/users/oncole3991 hxxp://webdav.cloudme.com/imin1399/xios hxxps://webdav.cloudme.com/imin1399/xios	almeria.recuperof[@]gmail.com mariangelatreglia[@]libero.it avv.angelonimilano[@]tiscali.it cadiz.recupero[@]gmail.com	MN600-D8102F401003102110C5114F1F18-0E8C	6a624e266f9656f3bb684b88bf027ac2d229aac98e26accbe4bd415306fa7482e71783d9f572c2d11772a48c174b05a1871a684f6ca153e28ff67483fb3ce344	Source			crrr.exe	4.5	Skater/ Dotfuscator	

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Year	# of Samples	C&C/Dropzone Related Strings	Notable Email Addresses	Notable MailBee Keys	Sample Hashes	gmail.it	Env. Info	Eye Pyramid	Spy Works	File Name	Com piler	Protection
2014	12	hxxps://webdav.hidrive.strato.com/users/oncole3991 hxxp://webdav.cloudme.com/imin1399/xios hxxp://webdav1.storegate.com/oldi4006/home/oldi4006 hxxps://webdav1.storegate.com/oldi4006/home/oldi4006 hxxp://webdav1.storegate.com/uwiq175/home/uwiq175 hxxps://webdav1.storegate.com/enzevu888/home/enzevu888 hxxps://webdav1.storegate.com/ordu1337/home/ordu1337 hxxp://webdav1.storegate.com/oqoku168646/home/oqoku168646 hxxp://webdav1.storegate.com/enzevu888/home/enzevu888 hxxps://webdav.cloudme.com/imin1399/xios hxxps://webdav1.storegate.com/uwiq175/home/uwiq175 hxxp://webdav.hidrive.strato.com/users/oncole3991 hxxp://webdav1.storegate.com/ordu1337/home/ordu1337 hxxps://webdav1.storegate.com/oqoku168646/home/oqoku168646	almeria.recuper o[.]gmail.com mariangelatregl ia[.]libero.it cadiz.recupero[@.]gmail.com	MN600- D8102F401003102 110C5114F1F18- 0E8C	faeb185c0d2048fce0597b899047d4c2 22d31c5f94ea94d19dcfe788e5dd3da8 906624aec0b63d5a6f1c8f0fa4386af02 365508cbe9c12498ee60432984bdc9c	Source				crrr.exe	3.5	Skater/ Dotfuscator
2014	1	hxxps://webdav.hidrive.strato.com/users/oncole3991 hxxp://webdav.hidrive.strato.com/users/oncole3991	almeria.recuper o[.]gmail.com mariangelatregl ia[.]libero.it avv.angelonimil ano[.]tiscali.it cadiz.recupero[@.]gmail.com	MN600- D8102F401003102 110C5114F1F18- 0E8C	137846f698de9b30fe0fb81af20f175f36 cf7c6297e3f920996e607cf80f518a	Source		\\Work\EyePyramid*	mfr.exe	4.5	Skater/ Dotfuscator	

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Year	# of Samples	C&C/Dropzone Related Strings	Notable Email Addresses	Notable MailBee Keys	Sample Hashes	gmail.it	Env. Info	Eye Pyramid	Spy Works	File Name	Compiler	Protection
2014	2	hxps://webdav.hidrive.strato.com/users/oncole3991 hxxp://webdav.hidrive.strato.com/users/oncole3991 hxxp://webdav1.storegate.com/enzevu888/home/enzevu888 hxps://webdav1.storegate.com/enzevu888/home/enzevu888		MN600-D8102F401003102110C5114F1F18-0E8C	55c9a611103f43070ba186fe70d0253ec1ff21f644d8ae92f9b02b4a1f4c0ea1f9bf0244a99437213bbb8dd3ff1ca2995a519e9fccf1409566460becc9062e2d	Binary and Source				crrr.exe	3.5	Skater/Dotfuscator
2014	12	hxps://webdav.hidrive.strato.com/users/oncole3991 hxxp://webdav.hidrive.strato.com/users/oncole3991	almeria.recupero[.]gmail.com mariangelatreglia[.]libero.it avv.angelonimilano[.]tiscali.it cadiz.recupero[.]gmail.com	MN600-D8102F401003102110C5114F1F18-0E8C	9c3d491033f8c9452e70bb37caaa9c49573515e2e5cf7af5615fd78ec90cfce80970e403b26e10159639532190a4125f4ddc4e4575d7b98e9be98a7037ff8ebb	Source			run.exe	4.5	Skater/Dotfuscator	
2015	2	hxps://webdav.hidrive.strato.com/users/oncole3991 hxxp://webdav.hidrive.strato.com/users/oncole3991	almeria.recupero[.]gmail.com mariangelatreglia[.]libero.it avv.angelonimilano[.]tiscali.it cadiz.recupero[.]gmail.com	MN600-D8102F401003102110C5114F1F18-0E8C	51a96dad0bba7a89431afe04e7eb73b7e6186dc28ae2cfc125989785c859e9e2a0c25021e04b95cc4af1e001109ef559834c4a343b085d2ebb16d0a495179f70	Source			run.exe	4.5	Skater/Dotfuscator	
2015	1	hxps://webdav.hidrive.strato.com/users/oncole3991 hxxp://webdav.hidrive.strato.com/users/oncole3991	rinomorbegno[.]tiscali.it almeria.recupero[.]gmail.com mariangelatreglia[.]libero.it cadiz.recupero[.]gmail.com antonio_francione[.]alice.it	MN600-D8102F401003102110C5114F1F18-0E8C	590f43c66ec69b9534c893acbb2fce7f1780fe5ac0e7fca7462db1600ad91f38	Source	:\projects\vs2005*		vmgr.exe	4.5	Skater/Dotfuscator	

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Year	# of Samples	C&C/Dropzone Related Strings	Notable Email Addresses	Notable MailBee Keys	Sample Hashes	gmail.it	Env. Info	Eye Pyramid	Spy Works	File Name	Compiler	Protection
2015	24				383dd234d22ead747319a04847d789bcedeacd0137a51ff394bab10256ab4b8e93c19d6e744053f4b337c9026e09c13e8d1019d535fdc21c2b1a21937e5aa76f					crrr.exe	4.5	/ConfuserEx*1
2015	15	hxxps://webdav.hidrive.strato.com/users/oncole3991 hxxp://webdav.hidrive.strato.com/users/oncole3991	antonio_francione[alice.it mariangelatreglia[libero.it almeria.recupero[gmail.com cadiz.recupero[gmail.com rinomorbegno[tiscali.it avv.angelonimilano[tiscali.it	MN600-D8102F401003102110C5114F1F18-0E8C	d910283342c7be67b03a01cac2aae5d310ac6e6d9d3572df324eb2afe01272fb0a718f2322a8eb15633f8d0cd72f653aab5921e3a581bf8cb8222bdd4dbb7bb	Source			crrr.exe	4.5	Skater/Dotfuscator	
2015	2	hxxps://webdav.hidrive.strato.com/users/oncole3991 hxxp://webdav.hidrive.strato.com/users/oncole3991	antonio_francione[alice.it mariangelatreglia[libero.it almeria.recupero[gmail.com cadiz.recupero[gmail.com rinomorbegno[tiscali.it avv.angelonimilano[tiscali.it	MN600-D8102F401003102110C5114F1F18-0E8C	d874fe7cd08aff55655a3e35f96c895a3cf84bfa92f482eb7d404f8feb4de130d4439954ff2a158a861946e1a223e97a46b0b55669857dcdf5cc70e459d24cd	Source			stkr.exe	4.5	Skater/Dotfuscator	

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Year	# of Samples	C&C/Dropzone Related Strings	Notable Email Addresses	Notable MailBee Keys	Sample Hashes	gmail.it	Env. Info	Eye Pyramid	Spy Works	File Name	Compiler	Protection
2015	3	hxxps://webdav.hidrive.strato.com/users/oncole3991 hxxp://webdav.hidrive.strato.com/users/oncole3991	antonio_francione[@]alice.it mariangelatreglia[@]libero.it almeria.recupero[@]gmail.com cadiz.recupero[@]gmail.com rinomorbegno[@]tiscali.it avv.angelonimilano[@]tiscali.it	MN600-D8102F401003102110C5114F1F18-0E8C	b860b98eed4f2214cfd95375caa82e1c5d1e438086220d2f08d1f86fd21a54da1012f0717543409a3dfa4418bfdcde31ecc55ef7c673a13f5dbcd131c4a0db22	Source				ghk.exe	4.5	Skater/Dotfuscator
2016	7				6f1d9aca5cd32bc70056289854ba5afa9a5698e807bc9575f162a4d964c88504d728caa5901e8893b5ba97ef8ad58a73fec98ab9f2c93b3f3a0bc31a20eabdbd					crrr.exe	4.5	/ConfuserEx *1

*1: Please note that the samples packed with ConfuserEx are still being verified.

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