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# Hashcat Example hashes

Unless otherwise noted, the password for all example hashes is **hashcat**

Hash-Mode	Hash-Name	Example
0	MD5	8743b52063cd84097a65d1633f5c74f5
10	md5(\$pass.\$salt)	01dfaee6e5d4d90d9892622325959afbe:7050461
20	md5(\$salt.\$pass)	f0fda58630310a6dd91a7d8f0a4ceda2:4225637426
30	md5(utf16le(\$pass).\$salt)	b31d032cfdfc47a399990a71e43c5d2a:144816
40	md5(\$salt.utf16le(\$pass))	d63d0e21fdc05f618d55ef306c54af82:13288442151473
50	HMAC-MD5 (key = \$pass)	fc741db0a2968c39d9c2a5cc75b05370:1234

<b>Hash-Mode</b>	<b>Hash-Name</b>	<b>Example</b>
60	HMAC-MD5 (key = \$salt)	bfd280436f45fa38eaacac3b00518f29:1234
70	md5(utf16le(\$pass))	2303b15bfa48c74a74758135a0df1201
100	SHA1	b89eaac7e61417341b710b727768294d0e6a277b
110	sha1(\$pass.\$salt)	2fc5a684737ce1bf7b3b239df432416e0dd07357:2014
120	sha1(\$salt.\$pass)	cac35ec206d868b7d7cb0b55f31d9425b075082b:5363620024
130	sha1(utf16le(\$pass).\$salt)	c57f6ac1b71f45a07dbd91a59fa47c23abcd87c2:631225
140	sha1(\$salt.utf16le(\$pass))	5db61e4cd8776c7969cf62456da639a4c87683a:8763434884872
150	HMAC-SHA1 (key = \$pass)	c898896f3f70f61bc3fb19bef222aa860e5ea717:1234
160	HMAC-SHA1 (key = \$salt)	d89c92b4400b15c39e462a8caa939ab40c3aeeeaa:1234
170	sha1(utf16le(\$pass))	b9798556b741befdbddcbf640d1dd59d19b1e193
200	MySQL323	7196759210defdc0
300	MySQL4.1/MySQL5	fcf7c1b8749cf99d88e5f34271d636178fb5d130
400	phpass, WordPress (MD5),	
Joomla (MD5)	\$P\$984478476IagS59wHZvyQMArzfx58u.	
400	phpass, phpBB3 (MD5)	\$H\$984478476IagS59wHZvyQMArzfx58u.
500	md5crypt, MD5 (Unix), Cisco-IOS 1 (MD5) [^2]	\$1\$28772684\$iEwNOgGugqO9.bIz5sk8k/

Hash-Mode	Hash-Name	Example
501	Juniper IVE	3u+UR6n8AgABAAAAHxxdXKmiOmUoqKnZlf8lTOhIPYy93EAkbP1
600	BLAKE2b-512	\$BLAKE2\$296c269e70ac5f0095e6fb47693480f0f7b97ccd0307f5c
900	MD4	afe04867ec7a3845145579a95f72eca7
1000	NTLM	b4b9b02e6f09a9bd760f388b67351e2b
1100	Domain Cached Credentials (DCC), MS Cache	4dd8965d1d476fa0d026722989a6b772:3060147285011
1300	SHA2-224	e4fa1555ad877bf0ec455483371867200eee89550a93eff2f95a61:
1400	SHA2-256	127e6fbfe24a750e72930c220a8e138275656b8e5d8f48a98c3c92
1410	sha256(\$pass.\$salt)	c73d08de890479518ed60cf670d17faa26a4a71f995c1dcc978165
1420	sha256(\$salt.\$pass)	eb368a2dfd38b405f014118c7d9747fcc97f4f0ee75c05963cd9da6
1430	sha256(utf16le(\$pass).\$salt)	4cc8eb60476c33edac52b5a7548c2c50ef0f9e31ce656c6f4b213f9
1440	sha256(\$salt.utf16le(\$pass))	a4bd99e1e0aba51814e81388badb23ecc560312c4324b2018ea7e
1450	HMAC-SHA256 (key = \$pass)	abaf88d66bf2334a4a8b207cc61a96fb46c3e38e882e6f6f886742f
1460	HMAC-SHA256 (key = \$salt)	8efbef4cec28f228fa948daaf4893ac3638fbe81358ff9020be1d7a
1470	sha256(utf16le(\$pass))	9e9283e633f4a7a42d3abc93701155be8afe5660da24c8758e7d3
1500	decrypt, DES (Unix), Traditional DES	48c/R8JAv757A
1600	Apache <i>apr1</i> MD5, md5apr1, MD5 (APR) [^2]	\$apr1\$71850310\$gh9m4xcAn3MGxogwX/ztb.

Hash-Mode	Hash-Name	Example
1700	SHA2-512	82a9dda829eb7f8ffe9fbe49e45d47d2dad9664fbb7adf72492e3c
1710	sha512(\$pass.\$salt)	e5c3ede3e49fb86592fb03f471c35ba13e8d89b8ab65142c9a8fd
1720	sha512(\$salt.\$pass)	976b451818634a1e2acba682da3fd6efa72adf8a7a08d7939550c
1730	sha512(utf16le(\$pass).\$salt)	13070359002b6fbb3d28e50fba55efcf3d7cc115fe6e3f6c98bf0e3
1740	sha512(\$salt.utf16le(\$pass))	bae3a3358b3459c761a3ed40d34022f0609a02d90a0d7274610b
1750	HMAC-SHA512 (key = \$pass)	94cb9e31137913665dbea7b058e10be5f050cc356062a2c9679ed
1760	HMAC-SHA512 (key = \$salt)	7cce966f5503e292a51381f238d071971ad5442488f340f98e379b
1770	sha512(utf16le(\$pass))	79bba09eb9354412d0f2c037c22a777b8bf549ab12d49b77d5b2
1800	sha512crypt 6, SHA512 (Unix) [^2]	\$6\$52450745\$k5ka2p8bFuSmoVT1tzOyyuaREkkKBcCNqoDKzYij
2000	STDOUT	n/a
2100	Domain Cached Credentials 2 (DCC2), MS Cache 2	\$DCC2\$10240#tom#e4e938d12fe5974dc42a90120bd9c90f
2400	Cisco-PIX MD5	dRRVnUmUHXOTt9nk
2410	Cisco-ASA MD5	02dMBMYkTdC5Ziyp:36
2500	WPA-EAPOL-PBKDF2 [^1]	<a href="https://hashcat.net/misc/example_hashes/hashcat.hccapx">https://hashcat.net/misc/example_hashes/hashcat.hccapx</a>
2501	WPA-EAPOL-PMK [^14]	<a href="https://hashcat.net/misc/example_hashes/hashcat-pmk.hccapx">https://hashcat.net/misc/example_hashes/hashcat-pmk.hccapx</a>
2600	md5(md5(\$pass))	a936af92b0ae20b1ff6c3347a72e5fbe

Hash-Mode	Hash-Name	Example
3000	LM	299bd128c1101fd6
3100	Oracle H: Type (Oracle 7+)	7A963A529D2E3229:3682427524
3200	bcrypt 2*, Blowfish (Unix)	\$2a\$05\$LhayLxezLhK1LhWvKxCyLOj0j1u.Kj0jZ0pEmm134uzrQIF
3500	md5(md5(md5(\$pass)))	9882d0778518b095917eb589f6998441
3710	md5(\$salt.md5(\$pass))	95248989ec91f6d0439dbde2bd0140be:1234
3800	md5(\$salt.\$pass.\$salt)	2e45c4b99396c6cb2db8bda0d3df669f:1234
3910	md5(md5(\$pass).md5(\$salt))	250920b3a5e31318806a032a4674df7e:1234
4010	md5(\$salt.md5(\$salt.\$pass))	30d0cf4a5d7ed831084c5b8b0ba75b46:1234
4110	md5(\$salt.md5(\$pass.\$salt))	b4cb5c551a30f6c25d648560408df68a:1234
4300	md5(strtoupper(md5(\$pass)))	b8c385461bb9f9d733d3af832cf60b27
4400	md5(sha1(\$pass))	288496df99b33f8f75a7ce4837d1b480
4500	sha1(sha1(\$pass))	3db9184f5da4e463832b086211af8d2314919951
4510	sha1(sha1(\$pass).\$salt)	9138d472fce6fe50e2a32da4eec4ecdc8860f4d5:hashcat1
4520	sha1(\$salt.sha1(\$pass))	a0f835fdf57d36ebd8d0399cc44e6c2b86a1072b:5113582143527
4700	sha1(md5(\$pass))	92d85978d884eb1d99a51652b1139c8279fa8663
4710	sha1(md5(\$pass).\$salt)	53c724b7f34f09787ed3f1b316215fc35c789504:hashcat1
4800	iSCSI CHAP authentication, MD5(CHAP)	afd09efdd6f8ca9f18ec77c5869788c3:0102030405060708091011

Hash-Mode	Hash-Name	Example
	[^7]	
4900	sha1(\$salt.\$pass.\$salt)	85087a691a55cbb41ae335d459a9121d54080b80:488387841
5000	sha1(sha1(\$salt.\$pass.\$salt))	05ac0c544060af48f993f9c3cdf2fc03937ea35b:232725102020
5100	Half MD5	8743b52063cd8409
5200	Password Safe v3	<a href="https://hashcat.net/misc/example_hashes/hashcat.psafe3">https://hashcat.net/misc/example_hashes/hashcat.psafe3</a>
5300	IKE-PSK MD5	<a href="https://hashcat.net/misc/example_hashes/hashcat.ikemd5">https://hashcat.net/misc/example_hashes/hashcat.ikemd5</a>
5400	IKE-PSK SHA1	<a href="https://hashcat.net/misc/example_hashes/hashcat.ikesha1">https://hashcat.net/misc/example_hashes/hashcat.ikesha1</a>
5500	NetNTLMv1 / NetNTLMv1+ESS	u4-netntlm::kNS:338d08f8e26de9330000000000000000000000000000C
5600	NetNTLMv2	admin::N46iSNekpT:08ca45b7d7ea58ee:88dcbe4446168966a15:
5700	Cisco-IOS type 4 (SHA256)	2btjy78REtmYkkW0csHUbJZostRXoWdX1mGrmmfeHI
5800	Samsung Android Password/PIN	0223b799d526b596fe4ba5628b9e65068227e68e:f6d45822728d
6000	RIPEMD-160	012cb9b334ec1aeb71a9c8ce85586082467f7eb6
6100	Whirlpool	7ca8eaaaa15eaa4c038b4c47b9313e92da827c06940e69947f85b
6211	TrueCrypt 5.0+ PBKDF2-HMAC-RIPEMD160 + AES	<a href="https://hashcat.net/misc/example_hashes/hashcat_ripemd160_a">https://hashcat.net/misc/example_hashes/hashcat_ripemd160_a</a>
6211	TrueCrypt 5.0+ PBKDF2-HMAC-RIPEMD160 + Serpent	<a href="https://hashcat.net/misc/example_hashes/hashcat_ripemd160_s">https://hashcat.net/misc/example_hashes/hashcat_ripemd160_s</a>
6211	TrueCrypt 5.0+ PBKDF2-HMAC-	<a href="https://hashcat.net/misc/example_hashes/hashcat_ripemd160_1">https://hashcat.net/misc/example_hashes/hashcat_ripemd160_1</a>

Hash-Mode	Hash-Name	Example
	RIPEMD160 + Twofish	
6212	TrueCrypt 5.0+ PBKDF2-HMAC-RIPEMD160 + AES-Twofish	<a href="https://hashcat.net/misc/example_hashes/hashcat_ripemd160_aes_twofish">https://hashcat.net/misc/example_hashes/hashcat_ripemd160_aes_twofish</a>
6213	TrueCrypt 5.0+ PBKDF2-HMAC-RIPEMD160 + AES-Twofish-Serpent	<a href="https://hashcat.net/misc/example_hashes/hashcat_ripemd160_aes_twofish_serpent">https://hashcat.net/misc/example_hashes/hashcat_ripemd160_aes_twofish_serpent</a>
6212	TrueCrypt 5.0+ PBKDF2-HMAC-RIPEMD160 + Serpent-AES	<a href="https://hashcat.net/misc/example_hashes/hashcat_ripemd160_serpent_aes">https://hashcat.net/misc/example_hashes/hashcat_ripemd160_serpent_aes</a>
6213	TrueCrypt 5.0+ PBKDF2-HMAC-RIPEMD160 + Serpent-Twofish-AES	<a href="https://hashcat.net/misc/example_hashes/hashcat_ripemd160_serpent_twofish_aes">https://hashcat.net/misc/example_hashes/hashcat_ripemd160_serpent_twofish_aes</a>
6212	TrueCrypt 5.0+ PBKDF2-HMAC-RIPEMD160 + Twofish-Serpent	<a href="https://hashcat.net/misc/example_hashes/hashcat_ripemd160_twofish_serpent">https://hashcat.net/misc/example_hashes/hashcat_ripemd160_twofish_serpent</a>
6221	TrueCrypt 5.0+ SHA512 + AES	<a href="https://hashcat.net/misc/example_hashes/hashcat_sha512_aes">https://hashcat.net/misc/example_hashes/hashcat_sha512_aes</a>
6221	TrueCrypt 5.0+ SHA512 + Serpent	<a href="https://hashcat.net/misc/example_hashes/hashcat_sha512_serpent">https://hashcat.net/misc/example_hashes/hashcat_sha512_serpent</a>
6221	TrueCrypt 5.0+ SHA512 + Twofish	<a href="https://hashcat.net/misc/example_hashes/hashcat_sha512_twofish">https://hashcat.net/misc/example_hashes/hashcat_sha512_twofish</a>
6222	TrueCrypt 5.0+ SHA512 + AES-Twofish	<a href="https://hashcat.net/misc/example_hashes/hashcat_sha512_aes_twofish">https://hashcat.net/misc/example_hashes/hashcat_sha512_aes_twofish</a>
6223	TrueCrypt 5.0+ SHA512 + AES-Twofish-Serpent	<a href="https://hashcat.net/misc/example_hashes/hashcat_sha512_aes_twofish_serpent">https://hashcat.net/misc/example_hashes/hashcat_sha512_aes_twofish_serpent</a>
6222	TrueCrypt 5.0+ SHA512 + Serpent-AES	<a href="https://hashcat.net/misc/example_hashes/hashcat_sha512_serpent_aes">https://hashcat.net/misc/example_hashes/hashcat_sha512_serpent_aes</a>
6223	TrueCrypt 5.0+ SHA512 + Serpent-Twofish-AES	<a href="https://hashcat.net/misc/example_hashes/hashcat_sha512_serpent_twofish_aes">https://hashcat.net/misc/example_hashes/hashcat_sha512_serpent_twofish_aes</a>

Hash-Mode	Hash-Name	Example
6222	TrueCrypt 5.0+ SHA512 + Twofish-Serpent	<a href="https://hashcat.net/misc/example_hashes/hashcat_sha512_twofish_serpent">https://hashcat.net/misc/example_hashes/hashcat_sha512_twofish_serpent</a>
6231	TrueCrypt 5.0+ Whirlpool + AES	<a href="https://hashcat.net/misc/example_hashes/hashcat_whirlpool_aes">https://hashcat.net/misc/example_hashes/hashcat_whirlpool_aes</a>
6231	TrueCrypt 5.0+ Whirlpool + Serpent	<a href="https://hashcat.net/misc/example_hashes/hashcat_whirlpool_serpent">https://hashcat.net/misc/example_hashes/hashcat_whirlpool_serpent</a>
6231	TrueCrypt 5.0+ Whirlpool + Twofish	<a href="https://hashcat.net/misc/example_hashes/hashcat_whirlpool_twofish">https://hashcat.net/misc/example_hashes/hashcat_whirlpool_twofish</a>
6232	TrueCrypt 5.0+ Whirlpool + AES-Twofish	<a href="https://hashcat.net/misc/example_hashes/hashcat_whirlpool_aes_twofish">https://hashcat.net/misc/example_hashes/hashcat_whirlpool_aes_twofish</a>
6233	TrueCrypt 5.0+ Whirlpool + AES-Twofish-Serpent	<a href="https://hashcat.net/misc/example_hashes/hashcat_whirlpool_aes_twofish_serpent">https://hashcat.net/misc/example_hashes/hashcat_whirlpool_aes_twofish_serpent</a>
6232	TrueCrypt 5.0+ Whirlpool + Serpent-AES	<a href="https://hashcat.net/misc/example_hashes/hashcat_whirlpool_serpent_aes">https://hashcat.net/misc/example_hashes/hashcat_whirlpool_serpent_aes</a>
6233	TrueCrypt 5.0+ Whirlpool + Serpent-Twofish-AES	<a href="https://hashcat.net/misc/example_hashes/hashcat_whirlpool_serpent_twofish_aes">https://hashcat.net/misc/example_hashes/hashcat_whirlpool_serpent_twofish_aes</a>
6232	TrueCrypt 5.0+ Whirlpool + Twofish-Serpent	<a href="https://hashcat.net/misc/example_hashes/hashcat_whirlpool_twofish_serpent">https://hashcat.net/misc/example_hashes/hashcat_whirlpool_twofish_serpent</a>
6241	TrueCrypt 5.0+ PBKDF2-HMAC-RIPEMD160 + AES + boot	<a href="https://hashcat.net/misc/example_hashes/hashcat_ripemd160_aes_boot">https://hashcat.net/misc/example_hashes/hashcat_ripemd160_aes_boot</a>
6241	TrueCrypt 5.0+ PBKDF2-HMAC-RIPEMD160 + Serpent + boot	<a href="https://hashcat.net/misc/example_hashes/hashcat_ripemd160_serpent_boot">https://hashcat.net/misc/example_hashes/hashcat_ripemd160_serpent_boot</a>
6241	TrueCrypt 5.0+ PBKDF2-HMAC-RIPEMD160 + Twofish + boot	<a href="https://hashcat.net/misc/example_hashes/hashcat_ripemd160_twofish_boot">https://hashcat.net/misc/example_hashes/hashcat_ripemd160_twofish_boot</a>

Hash-Mode	Hash-Name	Example
6242	TrueCrypt 5.0+ PBKDF2-HMAC-RIPEMD160 + AES-Twofish + boot	<a href="https://hashcat.net/misc/example_hashes/hashcat_ripemd160_1">https://hashcat.net/misc/example_hashes/hashcat_ripemd160_1</a>
6243	TrueCrypt 5.0+ PBKDF2-HMAC-RIPEMD160 + AES-Twofish-Serpent + boot	<a href="https://hashcat.net/misc/example_hashes/hashcat_ripemd160_1">https://hashcat.net/misc/example_hashes/hashcat_ripemd160_1</a>
6242	TrueCrypt 5.0+ PBKDF2-HMAC-RIPEMD160 + Serpent-AES + boot	<a href="https://hashcat.net/misc/example_hashes/hashcat_ripemd160_1">https://hashcat.net/misc/example_hashes/hashcat_ripemd160_1</a>
6243	TrueCrypt 5.0+ PBKDF2-HMAC-RIPEMD160 + Serpent-Twofish-AES + boot	<a href="https://hashcat.net/misc/example_hashes/hashcat_ripemd160_1">https://hashcat.net/misc/example_hashes/hashcat_ripemd160_1</a>
6242	TrueCrypt 5.0+ PBKDF2-HMAC-RIPEMD160 + Twofish-Serpent + boot	<a href="https://hashcat.net/misc/example_hashes/hashcat_ripemd160_1">https://hashcat.net/misc/example_hashes/hashcat_ripemd160_1</a>
6300	AIX {smd5}	{smd5}a5/yTL/u\$VfvgyHx1xUIXZYBocQpQY0
6400	AIX {ssha256}	{ssha256}06\$aJckFGJAB30LTe10\$ohUsB7LBPlgclE3hJg9x042DLJv
6500	AIX {ssha512}	{ssha512}06\$bJbkFGJAB30L2e23\$bXiXjyH5YGIyoWWmEVwq67n(
6600	1Password, agilekeychain	<a href="https://hashcat.net/misc/example_hashes/hashcat.agilekeychain">https://hashcat.net/misc/example_hashes/hashcat.agilekeychain</a>
6700	AIX {ssha1}	{ssha1}06\$bJbkFGJAB30L2e23\$dCESGOsP7jaIIAJ1QAcmaGeG.kr
6800	LastPass + LastPass sniffed[^4]	a2d1f7b7a1862d0d4a52644e72d59df5:500: <a href="mailto:lp@trash-mail.com">lp@trash-mail.com</a>
6900	GOST R 34.11-94	df226c2c6dc1d995c0299a33a084b201544293c31fc3d27953012
7000	FortiGate (FortiOS)	AK1AAECAwQFBgcICRARNQqgeC3is8gv2xWWRony9NjnDgE=
7200	GRUB 2	grub.pbkdf2.sha512.10000.7d391ef48645f626b427b1fae06a721



Hash-Mode	Hash-Name	Example
8800	Android FDE <= 4.3	<a href="https://hashcat.net/misc/example_hashes/hashcat.android43fd1">https://hashcat.net/misc/example_hashes/hashcat.android43fd1</a>
8900	scrypt	SCRYPT:1024:1:1:MDIwMzMwNTQwNDQyNQ==:5FW+zWivLxgCV
9000	Password Safe v2	<a href="https://hashcat.net/misc/example_hashes/hashcat.psafe2.dat">https://hashcat.net/misc/example_hashes/hashcat.psafe2.dat</a>
9100	Lotus Notes/Domino 8	(HsjFebq0Kh9kH7aAZYc7kY30mC30mC3KmC30mCluagXrvWKj1)
9200	Cisco-IOS 8 (PBKDF2-SHA256)	\$8\$TnGX/fE4KGHOVU\$pEhnEvxrvaynpi8j4f.EMHr6M.FzU8xnZnB
9300	Cisco-IOS 9 (scrypt)	\$9\$2MJBozw/9R3UsU\$2lFhcKvpghcyw8deP25GOfyZaagyUOGBy
9400	MS Office 2007	<i>office</i> *2007*20*128*16*411a51284e0d0200b131a8949aaaa5cc
9500	MS Office 2010	<i>office</i> *2010*100000*128*16*772332010172777882672210147!
9600	MS Office 2013	<i>office</i> *2013*100000*256*16*7dd611d7eb4c899f74816d1dec81
9700	MS Office <= 2003 MD5 + RC4, oldoffice\$0, oldoffice\$1	\$oldoffice\$1*04477077758555626246182730342136*b1b72ff35
9710	MS Office <= 2003 \$0/\$1, MD5 + RC4, collider #1	\$oldoffice\$0*55045061647456688860411218030058*e7e24d16
9720	MS Office <= 2003 \$0/\$1, MD5 + RC4, collider #2	\$oldoffice\$0*55045061647456688860411218030058*e7e24d16
9800	MS Office <= 2003 SHA1 + RC4, oldoffice\$3, oldoffice\$4	\$oldoffice\$3*83328705222323020515404251156288*2855956a
9810	MS Office <= 2003 \$3, SHA1 + RC4, collider #1	\$oldoffice\$3*83328705222323020515404251156288*2855956a

Hash-Mode	Hash-Name	Example
9820	MS Office < 2003 \$3, SHA1 + RC4, collider #2	\$oldoffice\$3*83328705222323020515404251156288*2855956a
9900	Radmin2	22527bee5c29ce95373c4e0f359f079b
10000	Django (PBKDF2-SHA256)	pbkdf2_sha256\$20000\$H0dPx8NeajVu\$GiC4k5kqbbR9qWBIsRgI
10100	SipHash	ad61d78c06037cd9:2:4:81533218127174468417660201434054
10200	CRAM-MD5	\$cram_md5\$PG5vLXJlcGx5QGhhc2hjYXQubmV0Pg==\$dXNlciA0N
10300	SAP CODVN H (PWD SALTEDHASH) iSSHA-1	{x-isssha, 1024}C0624EvGSdAMCtuWnBBYBGA0chvqAfIKY74oEpv
10400	PDF 1.1 - 1.3 (Acrobat 2 - 4)	\$pdf\$1*2*40*-1*0*16*51726437280452826511473255744374*
10410	PDF 1.1 - 1.3 (Acrobat 2 - 4), collider #1	\$pdf\$1*2*40*-1*0*16*01221086741440841668371056103222*
10420	PDF 1.1 - 1.3 (Acrobat 2 - 4), collider #2	\$pdf\$1*2*40*-1*0*16*01221086741440841668371056103222*
10500	PDF 1.4 - 1.6 (Acrobat 5 - 8)	\$pdf\$2*3*128*-1028*1*16*da42ee15d4b3e08fe5b9ecea0e02ac
10600	PDF 1.7 Level 3 (Acrobat 9)	\$pdf\$5*5*256*-1028*1*16*20583814402184226866485332754
10700	PDF 1.7 Level 8 (Acrobat 10 - 11)	\$pdf\$5*6*256*-1028*1*16*21240790753544575679622633641
10800	SHA2-384	07371af1ca1fca7c6941d2399f3610f1e392c56c6d73fddffe38f18c
10810	sha384(\$pass.\$salt)	ca1c843a7a336234baf9db2e10bc38824ce523402fb7741286b1
10820	sha384(\$salt.\$pass)	63f63d7f82d4a4cb6b9ff37a6bc7c5ec39faaf9c9078551f5cbf7960
10830	sha384(utf16le(\$pass).\$salt)	3516a589d2ed4071bf5e36f22e11212b3ad9050b9094b23067103

Hash-Mode	Hash-Name	Example
10840	sha384(\$salt.utf16le(\$pass))	316e93ea8e04de3e5a909c53d36923a31a16c1b9e89b44201d608
10870	sha384(utf16le(\$pass))	48e61d68e93027fae35d405ed16cd01b6f1ae66267833b4a7aa17
10900	PBKDF2-HMAC-SHA256	sha256:1000:MTc3MTA0MTQwMjQxNzY=:PYjCU215Mi57AYPKva{
10901	RedHat 389-DS LDAP (PBKDF2-HMAC-SHA256)	{PBKDF2_SHA256}AAAgADkxMjM2NTIzMzgzMjQ3MjI4MDAwNTI
11000	PrestaShop	810e3d12f0f10777a679d9ca1ad7a8d9:M2uZ122bSHJ4Mi54tXGY
11100	PostgreSQL CRAM (MD5)	\$postgres\$postgres*f0784ea5*2091bb7d4725d1ca85e8de6ec3e
11200	MySQL CRAM (SHA1)	\$mysql\$na\$1c24ab8d0ee94d70ab1f2e814d8f0948a14d10b9*437
11300	Bitcoin/Litecoin wallet.dat	\$bitcoin\$96\$d011a1b6a8d675b7a36d0cd2efaca32a9f8dc1d57d6
11400	SIP digest authentication (MD5)	sip*192.168.100.100*192.168.100.121*username*asterisk*REG:
11500	CRC32 [^5]	c762de4a:00000000
11600	7-Zip	\$7z\$0\$19\$0\$salt\$8\$f6196259a7326e3f0000000000000000\$185(
11700	GOST R 34.11-2012 (Streebog) 256-bit, big-endian	57e9e50caec93d72e9498c211d6dc4f4d328248b48ecf46ba7abfa
11750	HMAC-Streebog-256 (key = \$pass), big-endian	0f71c7c82700c9094ca95eee3d804cc283b538bec49428a9ef8da7
11760	HMAC-Streebog-256 (key = \$salt), big-endian	d5c6b874338a492ac57ddc6871afc3c70dcfd264185a69d84cf839

Hash-Mode	Hash-Name	Example
11800	GOST R 34.11-2012 (Streebog) 512-bit, big-endian	5d5bdba48c8f89ee6c0a0e11023540424283e84902de08013aeek
11850	HMAC-Streebog-512 (key = \$pass), big-endian	be4555415af4a05078dcf260bb3c0a35948135df3dbf93f7c8b805
11860	HMAC-Streebog-512 (key = \$salt), big-endian	bebfb6831b3f9f958acb345a88cb98f30cb0374cff13e6012818487c
11900	PBKDF2-HMAC-MD5	md5:1000:MTg1MzA=:Lz84VOcrXd699Edsj34PP98+f4f3S0rTZ4kH
12000	PBKDF2-HMAC-SHA1	sha1:1000:MzU4NTA4MzIzNzA1MDQ=:19ofiY+ahBXhvKDsp0j2w
12100	PBKDF2-HMAC-SHA512	sha512:1000:ODQyMDEwNjQyODY=:MKaHNWXUsuJB3IEwBHbn
12200	eCryptfs	\$ecryptfs\$0\$1\$7c95c46e82f364b3\$60bba503f0a42d0c
12300	Oracle T: Type (Oracle 12+)	78281A9C0CF626BD05EFC4F41B515B61D6C4D95A250CD4A605
12400	BSDi Crypt, Extended DES	_9G..8147mpcfKT8g0U.
12500	RAR3-hp	RAR3*0*45109af8ab5f297a*adbf6c5385d7a40373e8f77d7b89d
12600	ColdFusion 10+	aee9edab5653f509c4c63e559a5e967b4c112273bc6bd84525e63
12700	Blockchain, My Wallet	\$blockchain\$288\$5420055827231730710301348670802335e45c
12800	MS-AzureSync PBKDF2-HMAC-SHA256	v1;PPH1_MD4,84840328224366186645,100,005a491d8bf371508
12900	Android FDE (Samsung DEK)	3842185411841262576840816047711238421854118412625768
13000	RAR5	\$rar5\$16\$74575567518807622265582327032280\$15\$f8b4064d

Hash-Mode	Hash-Name	Example
13100	Kerberos 5, etype 23, TGS-REP	\$krb5tgs\$23\$*user\$realm\$test/spn*\$63386d22d359fe4223030
13200	AxCrypt 1	<i>axcrypt*1*10000*aaf4a5b4a7185551fea2585ed69fe246*45c616</i>
13300	AxCrypt 1 in-memory SHA1 [^13]	\$axcrypt_sha1\$b89eaac7e61417341b710b727768294d0e6a277l
13400	KeePass 1 AES / without keyfile	<i>keepass*1*50000*0*375756b9e6c72891a8e5645a3338b8c8*82a</i>
13400	KeePass 2 AES / without keyfile	<i>keepass*2*6000*222*a279e37c38b0124559a83fa452a0269d56c</i>
13400	KeePass 1 Twofish / with keyfile	<i>keepass *1*6000*1*31c087828b0bb76362c10cae773aacdf*6d6c78b4f82</i>
13400	Keepass 2 AES / with keyfile	<i>keepass*2*6000*222*15b6b685bae998f2f608c909dc554e514f28</i>
13500	PeopleSoft PS_TOKEN	b5e335754127b25ba6f99a94c738e24cd634c35a:aa07d396f5038
13600	WinZip	<i>zip2*0*3*0*e3222d3b65b5a2785b192d31e39ff9de*1320*e*196</i>
13711	VeraCrypt PBKDF2-HMAC-RIPEMD160 + AES	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_ripemd160_aes">https://hashcat.net/misc/example_hashes/vc/hashcat_ripemd160_aes</a>
13712	VeraCrypt PBKDF2-HMAC-RIPEMD160 + AES-Twofish	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_ripemd160_aes_twofish">https://hashcat.net/misc/example_hashes/vc/hashcat_ripemd160_aes_twofish</a>
13711	VeraCrypt PBKDF2-HMAC-RIPEMD160 + Serpent	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_ripemd160_serpent">https://hashcat.net/misc/example_hashes/vc/hashcat_ripemd160_serpent</a>
13712	VeraCrypt PBKDF2-HMAC-RIPEMD160 + Serpent-AES	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_ripemd160_serpent_aes">https://hashcat.net/misc/example_hashes/vc/hashcat_ripemd160_serpent_aes</a>
13713	VeraCrypt PBKDF2-HMAC-RIPEMD160 +	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_ripemd160_serpent_aes">https://hashcat.net/misc/example_hashes/vc/hashcat_ripemd160_serpent_aes</a>

Hash-Mode	Hash-Name	Example
	Serpent-Twofish-AES	
13711	VeraCrypt PBKDF2-HMAC-RIPEMD160 + Twofish	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_ripemd160_twofish_aes_hmac.html">https://hashcat.net/misc/example_hashes/vc/hashcat_ripemd160_twofish_aes_hmac.html</a>
13712	VeraCrypt PBKDF2-HMAC-RIPEMD160 + Twofish-Serpent	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_ripemd160_twofish_serpent_hmac.html">https://hashcat.net/misc/example_hashes/vc/hashcat_ripemd160_twofish_serpent_hmac.html</a>
13751	VeraCrypt PBKDF2-HMAC-SHA256 + AES	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_sha256_aes_hmac.html">https://hashcat.net/misc/example_hashes/vc/hashcat_sha256_aes_hmac.html</a>
13752	VeraCrypt PBKDF2-HMAC-SHA256 + AES-Twofish	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_sha256_aes_twofish_hmac.html">https://hashcat.net/misc/example_hashes/vc/hashcat_sha256_aes_twofish_hmac.html</a>
13751	VeraCrypt PBKDF2-HMAC-SHA256 + Serpent	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_sha256_serpent_hmac.html">https://hashcat.net/misc/example_hashes/vc/hashcat_sha256_serpent_hmac.html</a>
13752	VeraCrypt PBKDF2-HMAC-SHA256 + Serpent-AES	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_sha256_serpent_aes_hmac.html">https://hashcat.net/misc/example_hashes/vc/hashcat_sha256_serpent_aes_hmac.html</a>
13753	VeraCrypt PBKDF2-HMAC-SHA256 + Serpent-Twofish-AES	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_sha256_serpent_twofish_aes_hmac.html">https://hashcat.net/misc/example_hashes/vc/hashcat_sha256_serpent_twofish_aes_hmac.html</a>
13751	VeraCrypt PBKDF2-HMAC-SHA256 + Twofish	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_sha256_twofish_hmac.html">https://hashcat.net/misc/example_hashes/vc/hashcat_sha256_twofish_hmac.html</a>
13752	VeraCrypt PBKDF2-HMAC-SHA256 + Twofish-Serpent	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_sha256_twofish_serpent_hmac.html">https://hashcat.net/misc/example_hashes/vc/hashcat_sha256_twofish_serpent_hmac.html</a>
13721	VeraCrypt PBKDF2-HMAC-SHA512 + AES	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_sha512_aes_hmac.html">https://hashcat.net/misc/example_hashes/vc/hashcat_sha512_aes_hmac.html</a>
13722	VeraCrypt PBKDF2-HMAC-SHA512 + AES-Twofish	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_sha512_twofish_aes_hmac.html">https://hashcat.net/misc/example_hashes/vc/hashcat_sha512_twofish_aes_hmac.html</a>

Hash-Mode	Hash-Name	Example
	Twofish	
13721	VeraCrypt PBKDF2-HMAC-SHA512 + Serpent	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_sha512_s">https://hashcat.net/misc/example_hashes/vc/hashcat_sha512_s</a>
13722	VeraCrypt PBKDF2-HMAC-SHA512 + Serpent-AES	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_sha512_s">https://hashcat.net/misc/example_hashes/vc/hashcat_sha512_s</a>
13723	VeraCrypt PBKDF2-HMAC-SHA512 + Serpent-Twofish-AES	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_sha512_s">https://hashcat.net/misc/example_hashes/vc/hashcat_sha512_s</a>
13721	VeraCrypt PBKDF2-HMAC-SHA512 + Twofish	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_sha512_t">https://hashcat.net/misc/example_hashes/vc/hashcat_sha512_t</a>
13722	VeraCrypt PBKDF2-HMAC-SHA512 + Twofish-Serpent	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_sha512_t">https://hashcat.net/misc/example_hashes/vc/hashcat_sha512_t</a>
13731	VeraCrypt PBKDF2-HMAC-Whirlpool + AES	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_whirlpool">https://hashcat.net/misc/example_hashes/vc/hashcat_whirlpool</a>
13732	VeraCrypt PBKDF2-HMAC-Whirlpool + AES-Twofish	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_whirlpool">https://hashcat.net/misc/example_hashes/vc/hashcat_whirlpool</a>
13731	VeraCrypt PBKDF2-HMAC-Whirlpool + Serpent	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_whirlpool">https://hashcat.net/misc/example_hashes/vc/hashcat_whirlpool</a>
13732	VeraCrypt PBKDF2-HMAC-Whirlpool + Serpent-AES	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_whirlpool">https://hashcat.net/misc/example_hashes/vc/hashcat_whirlpool</a>
13733	VeraCrypt PBKDF2-HMAC-Whirlpool + Serpent-Twofish-AES	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_whirlpool">https://hashcat.net/misc/example_hashes/vc/hashcat_whirlpool</a>

Hash-Mode	Hash-Name	Example
13731	VeraCrypt PBKDF2-HMAC-Whirlpool + Twofish	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_whirlpool">https://hashcat.net/misc/example_hashes/vc/hashcat_whirlpool</a>
13732	VeraCrypt PBKDF2-HMAC-Whirlpool + Twofish-Serpent	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_whirlpool">https://hashcat.net/misc/example_hashes/vc/hashcat_whirlpool</a>
13741	VeraCrypt PBKDF2-HMAC-RIPEMD160 + boot-mode + AES	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_ripemd16">https://hashcat.net/misc/example_hashes/vc/hashcat_ripemd16</a>
13742	VeraCrypt PBKDF2-HMAC-RIPEMD160 + boot-mode + AES-Twofish	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_ripemd16">https://hashcat.net/misc/example_hashes/vc/hashcat_ripemd16</a>
13743	VeraCrypt PBKDF2-HMAC-RIPEMD160 + boot-mode + AES-Twofish-Serpent	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_ripemd16">https://hashcat.net/misc/example_hashes/vc/hashcat_ripemd16</a>
13761	VeraCrypt PBKDF2-HMAC-SHA256 + boot-mode + Twofish	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_sha256_tw">https://hashcat.net/misc/example_hashes/vc/hashcat_sha256_tw</a>
13762	VeraCrypt PBKDF2-HMAC-SHA256 + boot-mode + Serpent-AES	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_sha256_s">https://hashcat.net/misc/example_hashes/vc/hashcat_sha256_s</a>
13763	VeraCrypt PBKDF2-HMAC-SHA256 + boot-mode + Serpent-Twofish-AES	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_sha256_ss">https://hashcat.net/misc/example_hashes/vc/hashcat_sha256_ss</a>
13761	VeraCrypt PBKDF2-HMAC-SHA256 + boot-mode + PIM + AES [^16]	<a href="https://hashcat.net/misc/example_hashes/vc/hashcat_sha256_a">https://hashcat.net/misc/example_hashes/vc/hashcat_sha256_a</a>
13771	VeraCrypt Streebog-512 + XTS 512 bit	TBD
13772	VeraCrypt Streebog-512 + XTS 1024 bit	TBD

Hash-Mode	Hash-Name	Example
13773	VeraCrypt Streebog-512 + XTS 1536 bit	TBD
13800	Windows Phone 8+ PIN/password	95fc4680bcd2a5f25de3c580cbebadbbf256c1f0ff2e9329c58e36f8
13900	OpenCart	6e36dcfc6151272c797165fce21e68e7c7737e40:472433673
14000	DES (PT = \$salt, key = \$pass) [^8]	a28bc61d44bb815c:1172075784504605
14100	3DES (PT = \$salt, key = \$pass) [^9]	37387ff8d8daf15:8152001061460743
14400	sha1(CX)	fd9149fb3ae37085dc6ed1314449f449fbf77aba:87740665218240
14500	Linux Kernel Crypto API (2.4)	\$cryptoapi\$9\$2\$030000000000000000000000000000000000000000000000\$000000
14600	LUKS [^10]	<a href="https://hashcat.net/misc/example_hashes/hashcat_luks_testfiles">https://hashcat.net/misc/example_hashes/hashcat_luks_testfiles</a>
14700	iTunes backup < 10.0 [^11]	itunes_backup*9*b8e3f3a970239b22ac199b622293fe4237b9d16e
14800	iTunes backup >= 10.0 [^11]	itunes_backup*10*8b715f516ff8e64442c478c2d9abb046fc6979ab
14900	Skip32 (PT = \$salt, key = \$pass) [^12]	c9350366:44630464
15000	FileZilla Server >= 0.9.55	632c4952b8d9adb2c0076c13b57f0c934c80bdc14fc1b4c341c2e0
15100	Juniper/NetBSD sha1crypt	\$sha1\$15100\$jiJDkz0E\$E8C7RQAD3NetbSDz7puNAY.5Y2jr
15200	Blockchain, My Wallet, V2	\$blockchain\$v2\$5000\$288\$060631524450055162478206078610
15300	DPAPI masterkey file v1 + local context	\$DPAPImk\$1*1*S-15-21-466364039-425773974-453930460-192!
15400	ChaCha20 [^20]	chacha20*0400000000000003*16*0200000000000001*5152535-
15500	JKS Java Key Store Private Keys (SHA1)	jksprivk*5A3AA3C3B7DD7571727E1725FB09953EF3BEDBD9*08

Hash-Mode	Hash-Name	Example
15600	Ethereum Wallet, PBKDF2-HMAC-SHA256	\$ethereum\$p*262144*323838313731313035343834373738373
15700	Ethereum Wallet, SCRYPT	\$ethereum\$s*262144*1*8*3436383733383831303534373630
15900	DPAPI masterkey file v2 + Active Directory domain context	\$DPAPImk\$2*2*S-15-21-423929668-478423897-489523715-1834
16000	Tripcode	pfaRCwDe0U
16100	TACACS+	\$tacacs-plus\$0\$5fde8e68\$4e13e8fb33df\$c006
16200	Apple Secure Notes	ASN*1*20000*80771171105233481004850004085037*d04b17
16300	Ethereum Pre-Sale Wallet, PBKDF2-HMAC-SHA256	\$ethereum\$w*e94a8e49deac2d62206bf9bfb7d2aaea7eb06c1a5
16400	CRAM-MD5 Dovecot	{CRAM-MD5}5389b33b9725e5657cb631dc50017ff1535ce4e2a1c
16500	JWT (JSON Web Token)	eyJhbGciOiJIUzI1NjQ.eyJzNDM2MzQyMCI6NTc2ODc1NDd9.f1nX
16600	Electrum Wallet (Salt-Type 1-3)	\$electrum\$1*44358283104603165383613672586868*c43a6632
16700	FileVault 2	\$fvde\$1\$16\$84286044060108438487434858307513\$20000\$f16
16800	WPA-PMKID-PBKDF2 [^1]	2582a8281bf9d4308d6f5731d0e61c61*4604ba734d4e*89acf0e;
16801	WPA-PMKID-PMK [^15]	2582a8281bf9d4308d6f5731d0e61c61*4604ba734d4e*89acf0e;
16900	Ansible Vault	\$ansible\$0*0*6b761adc6faeb0cc0bf197d3d4a4a7d3f1682e4b16
17200	PKZIP (Compressed)	\$pkzip2\$1*1*2*0*e3*1c5*eda7a8de*0*28*8*e3*eda7*5096*a
17210	PKZIP (Uncompressed)	\$pkzip2\$1*1*2*0*1d1*1c5*eda7a8de*0*28*0*1d1*eda7*5096

Hash-Mode	Hash-Name	Example
17220	PKZIP (Compressed Multi-File)	\$pkzip2\$3*1*1*0*8*24*a425*8827*d1730095cd829e245df04e\
17225	PKZIP (Mixed Multi-File)	\$pkzip2\$3*1*1*0*0*24*3e2c*3ef8*0619e9d17ff3f994065b99b1
17230	PKZIP (Mixed Multi-File Checksum-Only)	\$pkzip2\$8*1*1*0*8*24*a425*8827*3bd479d541019c2f323950\
17300	SHA3-224	412ef78534ba6ab0e9b1607d3e9767a25c1ea9d5e83176b4c2817
17400	SHA3-256	d60fcf6585da4e17224f58858970f0ed5ab042c3916b76b0b828e\
17500	SHA3-384	983ba28532cc6320d04f20fa485bcedb38bddb666eca5f1e5aa27\
17600	SHA3-512	7c2dc1d743735d4e069f3bda85b1b7e9172033dfdd8cd599ca094
17700	Keccak-224	e1dfad9bafeae6ef15f5bbb16cf4c26f09f5f1e7870581962fc84636
17800	Keccak-256	203f88777f18bb4ee1226627b547808f38d90d3e106262b5de9ca
17900	Keccak-384	5804b7ada5806ba79540100e9a7ef493654ff2a21d94d4f2ce4bf6
18000	Keccak-512	2fbf5c9080f0a704de2e915ba8fdae6ab00bbc026b2c1c8fa07da1:
18100	TOTP (HMAC-SHA1)	597056:3600
18200	Kerberos 5, etype 23, AS-REP	\$krb5asrep\$23\$ <a href="mailto:user@domain.com">user@domain.com</a> :3e156ada591263b8aab0965
18300	Apple File System (APFS)	\$fvde\$2\$16\$58778104701476542047675521040224\$20000\$396
18400	Open Document Format (ODF) 1.2 (SHA-256, AES)	<i>odf*1*1*100000*32*751854d8b90731ce0579f96bea6f0d4ac2fb</i>
18500	sha1(md5(md5(\$pass)))	888a2ffcb3854fba0321110c5d0d434ad1aa2880

Hash-Mode	Hash-Name	Example
18600	Open Document Format (ODF) 1.1 (SHA-1, Blowfish)	<i>odf*0*0*1024*16*bff753835f4ea15644b8a2f8e4b5be3d147b95</i>
18700	Java Object hashCode()	29937c08
18800	Blockchain, My Wallet, Second Password (SHA256)	YnM6WYERjjfhxwepT7zV6odWoEUz1X4esYQb4bQ3KZ7bbZAyOT
18900	Android Backup	\$ab\$5*0*10000*b8900e4885ff9cad8f01ee1957a43bd633fea124
19000	QNX /etc/shadow (MD5)	@m@75f6f129f9c9e77b6b1b78f791ed764a@874185753233005(
19100	QNX /etc/shadow (SHA256)	@s@0b365cab7e17ee1e7e1a90078501cc1aa85888d6da34e2f5b
19200	QNX /etc/shadow (SHA512)	@S@715df9e94c097805dd1e13c6a40f331d02ce589765a2100ec
19300	sha1(\$salt1.\$pass.\$salt2)	630d2e918ab98e5fad9c61c0e4697654c4c16d73:1846381287689
19500	Ruby on Rails Restful-Authentication	d7d5ea3e09391da412b653ae6c8d7431ec273ea2:238769868762
19600	Kerberos 5, etype 17, TGS-REP (AES128-CTS-HMAC-SHA1-96)	\$krb5tgs\$17\$user\$realm\$ae8434177efd09be5bc2eff8\$90b4ce5
19700	Kerberos 5, etype 18, TGS-REP (AES256-CTS-HMAC-SHA1-96)	\$krb5tgs\$18\$user\$realm\$8efd91bb01cc69dd07e46009\$735241
19800	Kerberos 5, etype 17, Pre-Auth	\$krb5pa\$17\$hashcat\$HASHCATDOMAIN.COM\$a17776abe53832
19900	Kerberos 5, etype 18, Pre-Auth	\$krb5pa\$18\$hashcat\$HASHCATDOMAIN.COM\$96c289009b0518
20011	DiskCryptor SHA512 + XTS 512 bit (AES)	<a href="https://hashcat.net/misc/example_hashes/dc/hashcat_aes.dc">https://hashcat.net/misc/example_hashes/dc/hashcat_aes.dc</a>

Hash-Mode	Hash-Name	Example
20011	DiskCryptor SHA512 + XTS 512 bit (Twofish)	<a href="https://hashcat.net/misc/example_hashes/dc/hashcat_twofish.d">https://hashcat.net/misc/example_hashes/dc/hashcat_twofish.d</a>
20011	DiskCryptor SHA512 + XTS 512 bit (Serpent)	<a href="https://hashcat.net/misc/example_hashes/dc/hashcat_serpent.c">https://hashcat.net/misc/example_hashes/dc/hashcat_serpent.c</a>
20012	DiskCryptor SHA512 + XTS 1024 bit (AES-Twofish)	<a href="https://hashcat.net/misc/example_hashes/dc/hashcat_aes_twofi">https://hashcat.net/misc/example_hashes/dc/hashcat_aes_twofi</a>
20012	DiskCryptor SHA512 + XTS 1024 bit (Twofish-Serpent)	<a href="https://hashcat.net/misc/example_hashes/dc/hashcat_twofish_s">https://hashcat.net/misc/example_hashes/dc/hashcat_twofish_s</a>
20012	DiskCryptor SHA512 + XTS 1024 bit (Serpent-AES)	<a href="https://hashcat.net/misc/example_hashes/dc/hashcat_serpent_i">https://hashcat.net/misc/example_hashes/dc/hashcat_serpent_i</a>
20013	DiskCryptor SHA512 + XTS 1536 bit (AES-Twofish-Serpent)	<a href="https://hashcat.net/misc/example_hashes/dc/hashcat_aes_twofi">https://hashcat.net/misc/example_hashes/dc/hashcat_aes_twofi</a>
20200	Python passlib pbkdf2-sha512	\$pbkdf2-sha512\$25000\$LyWE0HrP2RsjZCxIDGFMKQ\$1vC5Ohk2
20300	Python passlib pbkdf2-sha256	\$pbkdf2-sha256\$29000\$x9h7j/Ge8x6DMEao1VqrdQ\$kra3R1wEr
20400	Python passlib pbkdf2-sha1	\$pbkdf2\$131000\$r5WytYixPgfQ2jt3buXcg\$8Kdr.QQEoazIXNOr
20500	PKZIP Master Key	f1eff5c0368d10311dcfc419
20510	PKZIP Master Key (6 byte optimization) [^17]	f1eff5c0368d10311dcfc419
20600	Oracle Transportation Management (SHA256)	otm_sha256:1000:1234567890:S5Q9Kc0ETY6ZPyQU+JYY60oFjaJt

Hash-Mode	Hash-Name	Example
20710	sha256(sha256(\$pass).\$salt)	bfede293ecf6539211a7305ea218b9f3f608953130405cda9eaba6
20720	sha256(\$salt.sha256(\$pass))	bae9edada8358fcebc811f7d362f46277fb9d488379869fba65d7
20800	sha256(md5(\$pass))	74ee1fae245edd6f27bf36efc3604942479fceefbadab5dc5c0b538
20900	md5(sha1(\$pass).md5(\$pass).sha1(\$pass))	100b3a4fc1dc8d60d9bf40688d8b740a
21000	BitShares v0.x - sha512(sha512_bin(pass))	caec04bdf7c17f763a9ec7439f7c9abda112f1bfc9b1bb684fef9b6`
21100	sha1(md5(\$pass.\$salt))	aade80a61c6e3cd3cac614f47c1991e0a87dd028:6
21200	md5(sha1(\$salt).md5(\$pass))	e69b7a7fe1bf2ad9ef116f79551ee919:baa038987e582431a6d
21300	md5(\$salt.sha1(\$salt.\$pass))	799dc7d9aa4d3f404cc21a4936dbdcde:68617368636174
21400	sha256(sha256_bin(\$pass))	0cc1b58a543f372327aa0281e97ab56e345267ee46feabf7709515
21500	SolarWinds Orion	\$solarwinds\$0\$admin\$fj4EBQewCQUZ7IYHl0qL8uj9kQSBB3m7l
21501	SolarWinds Orion v2	\$solarwinds\$1\$3pHkk55NTYpAeV3EJjcAww==N4Ii2PxXX/bTZZv
21600	Web2py pbkdf2-sha512	pbkdf2(1000,20,sha512)\$744943\$c5f8cdef76e3327c908d8d96d4
21700	Electrum Wallet (Salt-Type 4)	\$electrum\$4*03eae309d8bda5dcbddaae8145469193152763894
21800	Electrum Wallet (Salt-Type 5)	\$electrum\$5*02170fee7c35f1ef3b229edc90fb0793b688a0d6f4
22000	WPA-PBKDF2-PMKID+EAPOL [^1]	WPA*01*4d4fe7aac3a2cecab195321ceb99a7d0*fc690c158264*1
22001	WPA-PMK-PMKID+EAPOL [^18]	WPA*01*5ce7ebe97a1bbfeb2822ae627b726d5b*27462da350ac
22100	BitLocker	\$bitlocker\$1\$16\$6f972989ddc209f1eccf07313a7266a2\$1048576

Hash-Mode	Hash-Name	Example
22200	Citrix NetScaler (SHA512)	2f9282ade42ce148175dc3b4d8b5916dae5211eee49886c3f7cc76
22300	sha256(\$salt.\$pass.\$salt)	755a8ce4e0cf0baee41d714aa35c9fca803106608f718f973eab006
22400	AES Crypt (SHA256)	\$aescrypt\$1*efc648908ca7ec727f37f3316dfd885c*eff5c87a3554
22500	MultiBit Classic .key (MD5)	\$multibit\$1*e5912fe5c84af3d5*5f0391c219e8ef62c06505b1f62:
22600	Telegram Desktop < v2.1.14 (PBKDF2-HMAC-SHA1)	\$telegram\$1*4000*913a7e42143b4eed0fb532dacfa04e3a0eaec
22700	MultiBit HD (scrypt)	\$multibit\$2*2e311aa2cc5ec99f7073cacc8a2d1938*e3ad782e7fc
22911	RSA/DSA/EC/OpenSSH Private Keys (0)	\$sshng\$0\$8\$7532262427635482\$1224\$e1b1690703b83fd0ab6e
22921	RSA/DSA/EC/OpenSSH Private Keys (6)	\$sshng\$6\$8\$7620048997557487\$1224\$13517a1204dc69528c47
22931	RSA/DSA/EC/OpenSSH Private Keys (\$1, 3)	\$sshng\$1\$16\$14987802644369864387956120434709\$1232\$ffa
22941	RSA/DSA/EC/OpenSSH Private Keys (4)	\$sshng\$4\$16\$01684556100059289727957814500256\$1232\$b0
22951	RSA/DSA/EC/OpenSSH Private Keys (5)	\$sshng\$5\$16\$52935050547964524511665675049973\$1232\$fe
23001	SecureZIP AES-128	zip3*0*1*128*0*b4630625c92b6e7848f6fd86*df2f62611b3d02c
23002	SecureZIP AES-192	zip3*0*1*192*0*53ff2de8c280778e1e0ab997*603eb37dbab9ea
23003	SecureZIP AES-256	zip3*0*1*256*0*39bff47df6152a0214d7a967*65ff418ffb3b1198
23100	Apple Keychain	keychain*74cd1efd49e54a8fdc8750288801e09fa26a33b1*66001
23200	XMPP SCRAM PBKDF2-SHA1	\$xmpp-scram\$0\$4096\$32\$bbc1467455fd9886f6c5d1520060173

Hash-Mode	Hash-Name	Example
23300	Apple iWork	\$iwork\$2\$1\$1\$4000\$b31b7320d1e7a5ee\$01f54d6f9e5090eb16
23400	Bitwarden [^21]	\$bitwarden\$1*100000*bm9yZXBseUBoYXNoY2F0Lm5ldA==*zA)
23500	AxCrypt 2 AES-128	<i>axcrypt</i> *2*10000*6d44c6d19076bce9920c5fb76b246c161926ce
23600	AxCrypt 2 AES-256	<i>axcrypt</i> *2*10000*79bea2d51670484a065241c52613b41a33bf56
23700	RAR3-p (Uncompressed)	<i>RAR3</i> *1*e54a73729887cb53*49b0a846*16*14*1*34620bcc81
23800	RAR3-p (Compressed)	<i>RAR3</i> *1*ad56eb40219c9da2*834064ce*32*13*1*eb47b1abe17
23900	BestCrypt v3 Volume Encryption	\$bcve\$3\$08\$234b8182cee7098b\$35c12ef76a1e88175c4c222da:
24100	MongoDB ServerKey SCRAM-SHA-1	<i>mongodb – scram</i> *0*dXNlcg==*10000*4p+f1tKpK18hQqrVr0UGC
24200	MongoDB ServerKey SCRAM-SHA-256	<i>mongodb – scram</i> *1*dXNlcg==*15000*qYaA1K1ZZSSpWfY+yqShl
24300	sha1(\$salt.sha1(\$pass.\$salt))	94520b02c04e79e08a75a84c2a6e3ed4e3874fe8:ThisIsATestSalt
24410	PKCS#8 Private Keys (PBKDF2-HMAC-SHA1 + 3DES/AES)	\$PEM\$1\$4\$f5662bd8383b4b40\$2048\$2993b585d3fb2e7b235ec
24420	PKCS#8 Private Keys (PBKDF2-HMAC-SHA256 + 3DES/AES)	\$PEM\$2\$4\$ed02960b8a10b1f1\$2048\$a634c482a95f23bd8fada5
24500	Telegram Desktop >= v2.1.14 (PBKDF2-HMAC-SHA512)	\$telegram\$2*100000*77461dcb457ce9539f8e4235d33bd12455
24600	SQLCipher	SQLCIPHER*1*64000*25548249195677404156261816261456*8
24700	Stuffit5	66a75cb059

Hash-Mode	Hash-Name	Example
24800	Umbraco HMAC-SHA1	8uigXIGMNI7BzwLCJIDbcKR2FP4=
24900	Dahua Authentication MD5	GRuHbyVp
25000*	SNMPv3 HMAC-MD5-96/HMAC-SHA1-96	\$SNMPv3\$0\$45889431\$30818f0201033011020409242fc0020300
25100*	SNMPv3 HMAC-MD5-96	\$SNMPv3\$1\$45889431\$30818f0201033011020409242fc0020300
25200*	SNMPv3 HMAC-SHA1-96	\$SNMPv3\$2\$45889431\$30818f02010330110204371780f3020300
25300	MS Office 2016 - SheetProtection	\$office\$2016\$0\$100000\$876MLoKTq42+/DLp415iZQ==\$TNDvpv
25400	PDF 1.4 - 1.6 (Acrobat 5 - 8) - edit password	\$pdf\$2*3*128*-3904*1*16*631ed33746e50fba5caf56bcc39e09e
25500	Stargazer Stellar Wallet XLM [^22]	\$stellar\$ZCtl/+vWiLL358Jz+xnP5A===\$GgmFU37DSX4evSMU\$CoN
25600	bcrypt(md5(\$pass)) / bcryptmd5	\$2a\$05\$/VT2Xs2dMd8GJKfrXhjYP.DkTjOVrY12yDN7/6I8ZV0q/1IE
25700	MurmurHash	b69e7687:05094309
25800	bcrypt(sha1(\$pass)) / bcryptsha1	\$2a\$05\$Uo385Fa0g86uUXHwZxB90.qMMdRFExaXePGka4WGFv.
25900	KNX IP Secure - Device Authentication Code	<i>knx-ip-secure-device-authentication-code</i> *3033*fa7c0d7
26000	Mozilla key3.db	<i>mozilla</i> *3DES*b735d19e6cadb5136376a98c2369f22819d08c79*
26100	Mozilla key4.db	<i>mozilla</i> *AES*5add91733b9b13310ea79a4b38de5c3f797c3bf1*5
26200	OpenEdge Progress Encode	lebVZteiEsdpkncc
26300	FortiGate256 (FortiOS256)	SH2MCKr6kt9rLQKbn/YTlncOnR6OtcJ1YL/h8hw2wWicjSRf3bbkSi

Hash-Mode	Hash-Name	Example
26401	AES-128-ECB NOKDF (PT = \$salt, key = \$pass)	e7a32f3210455cc044f26117c4612aab:860466277729653285232
26402	AES-192-ECB NOKDF (PT = \$salt, key = \$pass)	2995e91b798ef51232a91579edb1d176:49869364034411376791
26403	AES-256-ECB NOKDF (PT = \$salt, key = \$pass)	264a4248c9522cb74d33fe26cb596895:61270210011294880287:
26500	iPhone passcode (UID key + System Keybag)	\$uid0\$77889b1bca161ce876d976a102c7bf82\$30905457245514:
26600	MetaMask Wallet	\$metamask\$AARgM5AgABE2eWgJcWAwQIAFmSYoASZVZBIAR4E
26700*	SNMPv3 HMAC-SHA224-128	\$SNMPv3\$3\$45889431\$308197020103301102047aa1a79e02030
26800*	SNMPv3 HMAC-SHA256-192	\$SNMPv3\$4\$45889431\$30819f020103301102047fc5181802030
99999	Plaintext	hashcat

[^1] Password: "hashcat!"

[^2] rounds=[# of iterations] is **optional** e.g. \$5\$rounds=5000

[^3] Same format as in 2: but the number of rounds **must** be specified

[^4] The hash used here is **not** the one sent via e.g. the web interface to LastPass servers (pbkdf2\_sha256\_hex (pbkdf2\_sha256 (\$pass, \$email, \$iterations), \$pass, 1) but instead the one stored (by e.g. your browser or the pocket version) to disk. For instance, Opera and Chrome store the hash in local SQLite databases; Firefox uses files ending with "lpall.slps" - for Linux: 2nd line is interesting / base64 decode it; for Windows, see [here](#) - and\_key.itr

[^5] You can consider the second part as a "salt". If it is equal to 00000000, the CRC32 code will be considered as "not salted"

[^6] The raw sha256 output is used for base64() encoding (not the hexadecimal output)

[^7] The format is hash:salt:id

[^8] Password: "hashcat1"

[^9] Password: "hashcat1hashcat1hashcat1"

[^10] This file actually contains several examples of the different hash+cipher combinations. The password is stored in the pw file.

[^11] You can use [itunes\\_backup2hashcat](#) to extract the hashes from the Manifest.plist file

[^12] Password: "hashcat!!!". Min/max password length is exactly 10 characters/bytes. [^13] You can use [AxSuite by Fist0urs](#) to retrieve the hashes.

[^14] Password: a288fcf0caaacda9a9f58633ff35e8992a01d9c10ba5e02efdf8cb5d730ce7bc

[^15] Password: 5b13d4babb3714ccc62c9f71864bc984efd6a55f237c7a87fc2151e1ca658a9d

[^16] PIM: 500

[^17] full password in output is hashcat, but input provided must be without the first 6 bytes (therefore just: t)

[^18] 88f43854ae7b1624fc2ab7724859e795130f4843c7535729e819cf92f39535dc

[^19] use this SQL query to extract the hashes:

```
SELECT user,
CONCAT('$mysql',LEFT(authentication_string,6), '*', INSERT(HEX(SUBSTR(authentication_string,8)),41,0,'*')) AS
hash FROM user WHERE plugin = 'caching_sha2_password' AND authentication_string NOT LIKE
'%INVALIDSALTANDPASSWORD%';
```

[^20] Password: "hashcat\_hashcat\_hashcat\_hashcat\_"

[^21] you can extract the hashes with <https://github.com/0x6470/bitwarden2hashcat>

[^22] Password: lacoin

## Specific Hash Types

Hash-Mode	Hash-Name	Example
11	Joomla < 2.5.18	19e0e8d91c722e7091ca7a6a6fb0f4fa:54718031842521651757785603028777
12	PostgreSQL	a6343a68d964ca596d9752250d54bb8a:postgres
21	osCommerce, xt:Commerce	374996a5e8a5e57fd97d893f7df79824:36
22	Juniper NetScreen/SSG (ScreenOS)	nNxKL2rOEkbBc9BFLsVGG6OtOUO/8n:user
23	Skype	3af0389f093b181ae26452015f4ae728:user
24	SolarWinds Serv-U	e983672a03adcc9767b24584338eb378
101	nsldap, SHA-1(Base64),	{SHA}uJ6qx+YUFzQbcQtyd2gpTQ5qJ3s=



Hash-Mode	Hash-Name	Example
1411	SSHA-256(Base64), LDAP {SSHA256}	{SSHA256}OZiz0cnQ5hgyel3Emh7NCbhBRCQ+HVBwYplQunHYnER7TLuV
1421	hMailServer	8fe7ca27a17adc337cd892b1d959b4e487b8f0ef09e32214f44fb1b07e461c532e9ec3
1441	Episerver 6.x >= .NET 4	<i>episerver*1*MDEyMzQ1Njc4OWFiY2RIZg==*IRjiU46qHA7S6ZE7RfKUcYhB85ofArj1j7TrCtu</i>
1711	SSHA-512(Base64), LDAP {SSHA512}	{SSHA512}ALtwKGBdRgD+U0fPAy31C28RyKYx7+a8kmfkscsOeLknLHv2DBXYI7TDnTolQ\
1722	macOS v10.7	648742485c9b0acd786a233b2330197223118111b481abfa0ab8b3e8ede5f014fc7c523991
1731	MSSQL (2012, 2014)	0x02000102030434ea1b17802fd95ea6316bd61d2c94622ca3812793e8fb1672487b5c904i
2611	vBulletin < v3.8.5	16780ba78d2d5f02f3202901c1b6d975:568
2612	PHPS	\$PHPS\$34323438373734\$5b07e065b9d78d69603e71201c6cf29f
2711	vBulletin >= v3.8.5	bf366348c53ddcfbd16e63edfdd1eee6:181264250056774603641874043270
2811	MyBB 1.2+, IPB2+ (Invision Power Board)	8d2129083ef35f4b365d5d87487e1207:47204
3711	MediaWiki B type	\$B\$56668501\$0ce106caa70af57fd525aeaf80ef2898
4521	Redmine	1fb46a8f81d8838f46879aaa29168d08aa6bf22d:3290afd193d90e900e8021f81409d7a9
4522	PunBB	4a2b722cc65ecf0f7797cdaea4bce81f66716eef:653074362104

Hash-Mode	Hash-Name	Example
4711	Huawei sha1(md5(\$pass). \$salt)	53c724b7f34f09787ed3f1b316215fc35c789504:hashcat1
7100	macOS v10.8+ (PBKDF2-SHA512)	\$ml\$35460\$93a94bd24b5de64d79a5e49fa372827e739f4d7b6975c752c9a0ff1e5cf72e05:
7401	MySQL A (sha256crypt) [^19]	\$mysql\$A\$005*F9CC98CE08892924F50A213B6BC571A2C11778C5*62547939355939396:
12001	Atlassian (PBKDF2-HMAC- SHA1)	{PKCS5S2}NzIyNzM0NzY3NTIwNjI3MdDDis7wPxSbSzFqDGf7u/L00kSEnupbz36XCL0m7w
20711	AuthMe sha256	\$SHA\$7218532375810603\$bfede293ecf6539211a7305ea218b9f3f608953130405cda9eat
22301	Telegram Mobile App Passcode (SHA256)	\$telegram\$0*518c001aeb3b4ae96c6173be4cebe60a85f67b1e087b045935849e2f815b5e

## Legacy hash types

These hash types are only supported in [hashcat-legacy](#) or [oclHashcat](#).

Hash-Mode	Hash-Name	Example
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Hash-Mode	Hash-Name	Example
123	EPi	0x326C6D7B4E4F794B79474E36704F35723958397163735263516265456E3 0xAFC55E260B8F45C0C6512BCE776C1AD8312B56E6
190	sha1(LinkedIn) [^24]	b89eaac7e61417341b710b727768294d0e6a277b
1431	base64(sha256(unicode(\$pass))) [^23]	npKD5jP0p6QtOryTcBFVvor+VmDaJMh1jn01M+Ly3II=
3300	MD5(Sun) [^23]	\$md5\$rounds=904\$iPPKEBnEkp3JV8uX\$0L6m7rOFTFn.SGqo2M9W1
3610	md5(md5(\$salt).\$pass )[^23]	7b57255a15958ef898543ea6cc3313bc:1234
3720	md5(\$pass.md5(\$salt)) [^23]	10ce488714fdbde9453670e0e4cbe99c:1234
3721	WebEdition CMS [^23]	fa01af9f0de5f377ae8befb03865178e:5678
4210	md5(\$username.0.\$pass) [^23]	09ea048c345ad336ebe38ae5b6c4de24:1234
4600	sha1(sha1(sha1(\$pass))) [^23]	dc57f246485e62d99a5110afc9264b4ccbfcf3cc

[^23] Supported in [hashcat-legacy](#)

[^24] Supported in [oclHashcat](#)