BitPyLock Ransomware Now Threatens to Publish Stolen Data

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A new ransomware called BitPyLock has quickly gone from targeting individual workstations to trying to compromise networks and stealing files before encrypting devices.

BitPyLock was first discovered by MalwareHunterTeam on January 9th, 2020 and has since seen a trickle of new victims daily.

What is interesting is that we can compare the ransom notes of earlier versions with the latest versions to see a clear progression in the types of victims that are targeted.

To make matters worse, as ransomware operators begin stealing data before encrypting victims for use as leverage, BitPyLock actors claim to be adopting this tactic as well.

The BitPyLock Ransomware

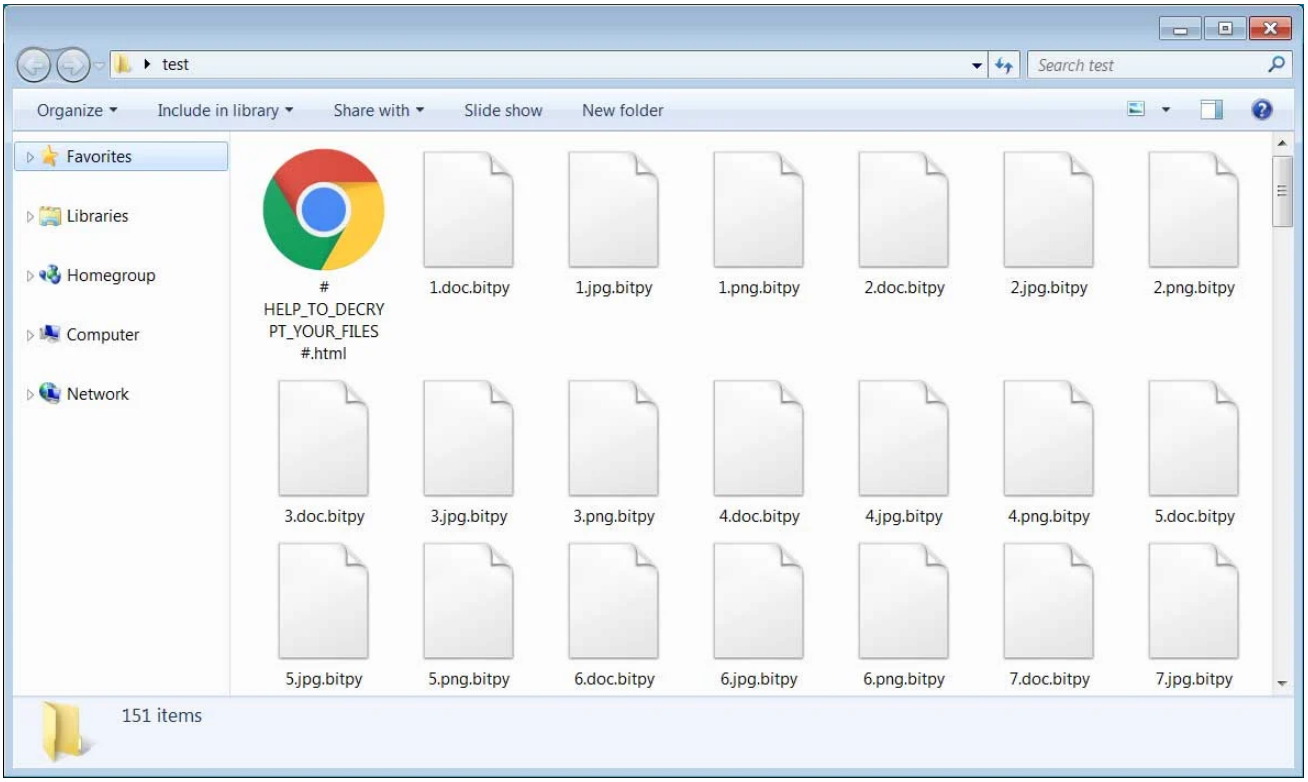
Based on our analysis, when first launched, BitPyLock will attempt to terminate any processes that contain the following strings. This is done to terminate security software and close files being used by backup software, web server daemons, virtual machines, and databases so that they can be encrypted.

```
backup, cobain, drop, drive, sql, database, vmware, virtual, agent, anti, iis, web,
server, apache
```

While encrypting files, BitPyLock will target 346 extensions (listed in the IOCs section) and will skip any files located in the following folders.

```
windows
windows.old
program files
program files (x86)
program data
$recycle.bin
system volume information
```

For every encrypted file, the ransomware will append the **.bitpy** extension as shown below. For example, a file named 1.doc will be encrypted and renamed to 1.doc.bitpy.

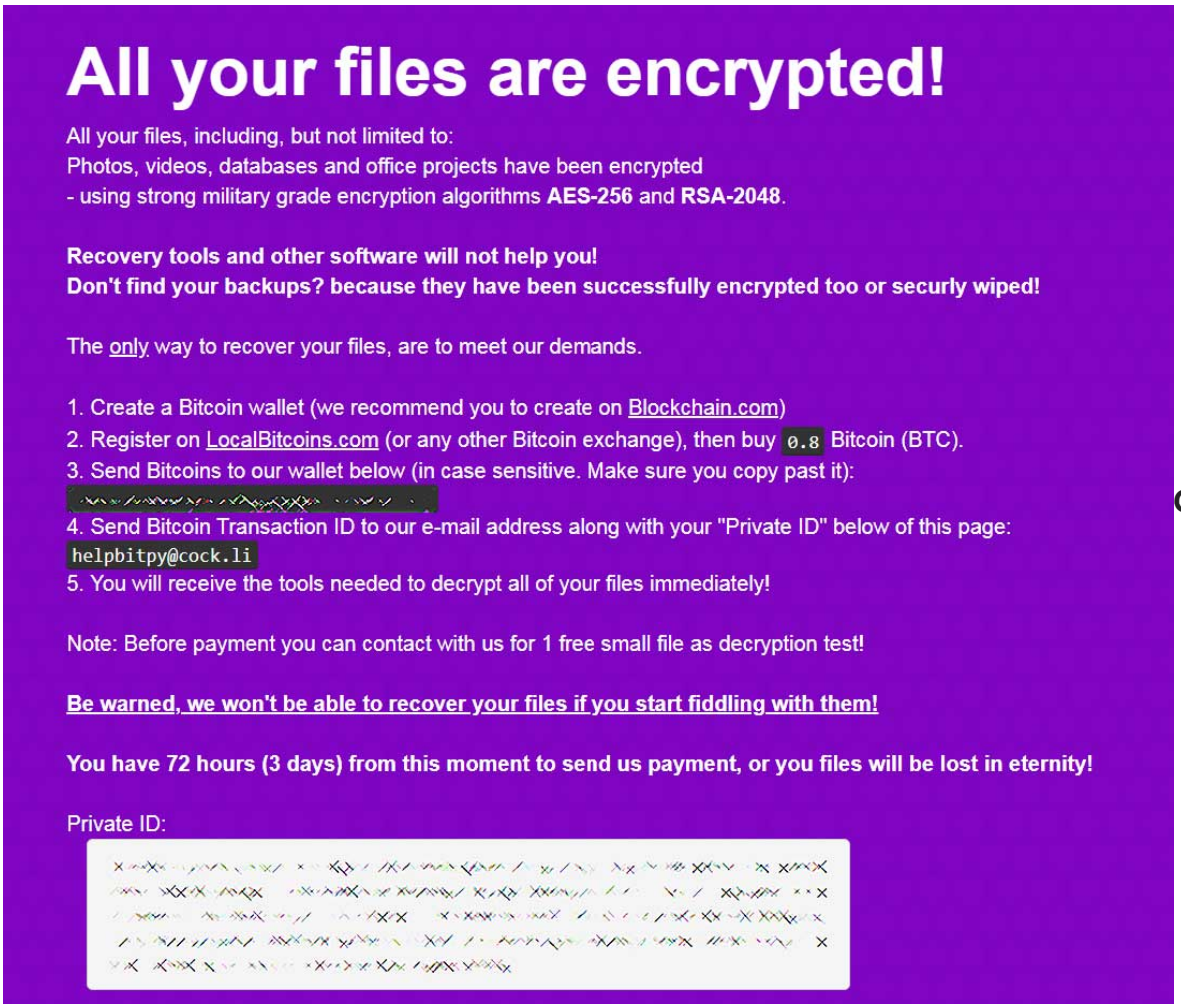


Encrypted BitPyLock files

In each folder and on the Windows desktop, BitPyLock will create a ransom note named **# HELP_TO_DECRYPT_YOUR_FILES #.html** that instructs the users to send a bitcoin ransom to the enclosed bitcoin address. It then instructs the victim to email the listed address to get a decryptor.

In the sample BleepingComputer analyzed, the ransom amount was hardcoded to .8 bitcoins.

The language in the original ransom note also indicated that the attackers were targeting individual machines rather than networks.



Original ransom note

Strangely, the sample that we saw had a static bitcoin address in the executable, which means every victim would have the same bitcoin address and thus it could make it impossible to determine who paid the ransom.

Evolves to network attacks and the publishing of stolen data

In a more recent version discovered by MalwareHunterTeam, the actors have changed their targeting to focus on network compromise and the claims of stealing data before encrypting devices.

New ransom note targeting networks

In this version of the ransom note, we can see that the attackers are targeting "all your files on all network machines".

For entire network decryption, BitPyLock's ransom amounts are also fairly low compared to other targeted ransomware at only approximately 5 bitcoins for the entire network.

The ransom note further states that they will release stolen data if a ransom payment is not made.

"If you do not wish to negotiate with us. We will make your company's private papers and databases public. This's is not a joke!"

Unlike Maze Ransomware and Sodinokibi Ransomware who have already released stolen files belonging to non-paying victims, BitPyLock has not done so at this time.

This could also just be an empty threat like ransomware operators used to make in the past. Unfortunately, there is no way to tell anymore as more ransomware actors begin to actually release stolen data.

IOCs:

Hashes:

```
274011aaa97fd19ad6d993a5555c9306090da6a9b16c991739033ebb7673a244
```

Associated file names:

```
# HELP_TO_DECRYPT_YOUR_FILES #.html
```

Targeted Extensions:

```
.frx, .jin, .xls, .xlsx, .pdf, .doc, .docx, .ppt, .pptx, .log, .txt, .gif, .png,
.conf, .data, .dat, .dwg, .asp, .aspx, .html, .tif, .htm, .php, .jpg, .jsp, .js,
.cnf, .cs, .vb, .vbs, .mdb, .mdf, .bak, .bkf, .java, .jar, .war, .pem, .pfx, .rtf,
.pst, .dbx, .mp3, .mp4, .mpg, .bin, .nvram, .vmdk, .vmsd, .vmx, .vmxf, .vmsn, .vmem,
.gz, .3dm, .3ds, .zip, .rar, .3fr, .3g2, .3gp, .3pr, .7z, .ab4, .accdb, .accde,
.accdr, .accdt, .ach, .acr, .act, .adb, .ads, .agdl, .ai, .ait, .al, .apj, .arw,
.asf, .asm, .asx, .avi, .awg, .back, .backup, .backupdb, .pbl, .bank, .bay, .bdb,
.bgt, .bik, .bkp, .blend, .bpw, .c, .cdf, .cab, .chm, .cdr, .cdr3, .cdr4, .cdr5,
.cdr6, .cdrw, .cdx, .ce1, .ce2, .cer, .cfp, .cgm, .cib, .class, .cls, .cmt, .cpi,
.cpp, .cr2, .craw, .crt, .crw, .csh, .csl, .csv, .dac, .db, .db3, .dbf, .db-journal,
.dc2, .dcr, .dcs, .ddd, .ddoc, .ddrw, .dds, .der, .des, .design, .dgc, .djvu, .dng,
.dot, .docm, .dotm, .dotx, .drf, .drw, .dtd, .dxb, .dxf, .jse, .dxg, .eml, .eps,
.erbsql, .erf, .exf, .fdb, .ffd, .fff, .fh, .fmb, .fhd, .fla, .flac, .flv, .fpx,
.fxg, .gray, .grey, .gry, .h, .hbk, .hpp, .ibank, .ibd, .ibz, .idx, .iif, .iiq,
.incpas, .indd, .jpe, .jpeg, .kc2, .kdbx, .kdc, .key, .kpdx, .lua, .m, .m4v, .max,
.mdc, .mef, .mfw, .mmw, .moneywell, .mos, .mov, .mrw, .msg, .myd, .nd, .ndd, .nef,
.nk2, .nop, .nrw, .ns2, .ns3, .ns4, .nsd, .nsf, .nsg, .nsh, .nwb, .nx2, .nxl, .nyf,
.oab, .obj, .odb, .odc, .odf, .odg, .odm, .odp, .ods, .odt, .oil, .orf, .ost, .otg,
.oth, .otp, .ots, .ott, .p12, .p7b, .p7c, .pab, .pages, .pas, .pat, .pcd, .pct,
.pdb, .pdd, .pef, .pl, .plc, .pot, .potm, .potx, .ppam, .pps, .ppsm, .ppsx, .pptm,
.prf, .ps, .psafe3, .psd, .pspimage, .ptx, .py, .qba, .qbb, .qbm, .qbr, .qbw, .qbx,
.qby, .r3d, .raf, .rat, .raw, .rdb, .rm, .rw2, .rwl, .rwz, .s3db, .sas7bdat, .say,
.sd0, .sda, .sdf, .sldm, .sldx, .sql, .sqlite, .sqlite3, .sqlitedb, .sr2, .srf,
.srt, .srw, .st4, .st5, .st6, .st7, .st8, .std, .sti, .stw, .stx, .svg, .swf, .sxc,
.sxd, .sxg, .sxi, .sxi, .sxm, .sxw, .tex, .tga, .thm, .tlg, .vob, .wallet, .wav,
.wb2, .wmv, .wpd, .wps, .x11, .x3f, .xis, .xla, .xlam, .xlk, .xlm, .xlr, .xlsb,
.xlsm, .xlt, .xltm, .xltx, .xlw, .ycbcra, .yuv
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- BitPyLock
- Data Exfiltration
- Extortion
- Ransomware

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Lawrence Abrams is the owner and Editor in Chief of BleepingComputer.com. Lawrence's area of expertise includes Windows, malware removal, and computer forensics. Lawrence

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