

.. /Bitsadmin.exe

Alternate data streams

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Execute

Used for managing background intelligent transfer

Paths:

C:\Windows\System32\bitsadmin.exe

C:\Windows\SysWOW64\bitsadmin.exe

Resources:

- <https://www.slideshare.net/chrisgates/windows-attacks-at-is-the-new-black-26672679>
- https://www.youtube.com/watch?v=_8xJaaQlpBo
- <https://gist.github.com/api0cradle/cdd2d0d0ec9abb686f0e89306e277b8f>

Acknowledgements:

- Rob Fuller (@mubix)
- Chris Gates (@carnal0wnage)
- Oddvar Moe (@oddvarmoe)

Detections:

- Sigma:
https://github.com/SigmaHQ/sigma/blob/62d4fd26b05f4d81973e7c8e80d7c1a0c6a29d0e/rules/windows/process_creation/proc_creation_win_bitsadmin_download.yml
- Sigma:
https://github.com/SigmaHQ/sigma/blob/62d4fd26b05f4d81973e7c8e80d7c1a0c6a29d0e/rules/web/proxy_generic/proxy_ua_bitsadmin_susp_tld.yml
- Sigma:
https://github.com/SigmaHQ/sigma/blob/62d4fd26b05f4d81973e7c8e80d7c1a0c6a29d0e/rules/windows/process_creation/proc_creation_win_bitsadmin_potential_persistence.yml
- Splunk:
https://github.com/splunk/security_content/blob/3f77e24974239fcb7a339080a1a483e6bad84a82/detections/endpoint/bitsadmin_download_file.yml
- IOC: Child process from bitsadmin.exe
- IOC: bitsadmin creates new files
- IOC: bitsadmin adds data to alternate data stream

Alternate data streams

Create a bitsadmin job named 1, add cmd.exe to the job, configure the job to run the target command from an Alternate data stream, then resume and complete the job.

```
bitsadmin /create 1 bitsadmin /addfile 1 c:\windows\system32\cmd.exe c:\data\playfolder\cmd.exe bitsadmin /SetNotifyCmdLine 1 c:\data\playfolder\1.txt:cmd.exe NULL bitsadmin /RESUME 1 bitsadmin /complete 1
```

Use case:	Performs execution of specified file in the alternate data stream, can be used as a defensive evasion or persistence technique.
Privileges required:	User
Operating systems:	Windows vista, Windows 7, Windows 8, Windows 8.1, Windows 10, Windows 11
ATT&CK® technique:	T1564.004

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Create a bitsadmin job named 1, add cmd.exe to the job, configure the job to run the target command, then resume and complete the job.

```
bitsadmin /create 1 bitsadmin /addfile 1 https://live.sysinternals.com/autoruns.exe
c:\data\playfolder\autoruns.exe bitsadmin /RESUME 1 bitsadmin /complete 1
```

Use case:	Download file from Internet
Privileges required:	User
Operating systems:	Windows vista, Windows 7, Windows 8, Windows 8.1, Windows 10, Windows 11
ATT&CK® technique:	T1105

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Command for copying cmd.exe to another folder

```
bitsadmin /create 1 & bitsadmin /addfile 1 c:\windows\system32\cmd.exe c:\data\playfolder\cmd.exe & bitsadmin
/RESUME 1 & bitsadmin /Complete 1 & bitsadmin /reset
```

Use case:	Copy file
Privileges required:	User
Operating systems:	Windows vista, Windows 7, Windows 8, Windows 8.1, Windows 10
ATT&CK® technique:	T1105

Execute

One-liner that creates a bitsadmin job named 1, add cmd.exe to the job, configure the job to run the target command, then resume and complete the job.

```
bitsadmin /create 1 & bitsadmin /addfile 1 c:\windows\system32\cmd.exe c:\data\playfolder\cmd.exe & bitsadmin
/SetNotifyCmdLine 1 c:\data\playfolder\cmd.exe NULL & bitsadmin /RESUME 1 & bitsadmin /Reset
```

Use case:	Execute binary file specified. Can be used as a defensive evasion.
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Privileges required: User
Operating systems: Windows vista, Windows 7, Windows 8, Windows 8.1, Windows 10
ATT&CK® technique: T1218