Symbolic Link

```
[0x1C8] ID: 00004, Type: C0000000 - $Reparse_Point
  [0x1CC] Attribute Length: 120
  [0x1D0] Attribute Non-Resident Status: Resident
  [0x1D1] Length of Stream Name: 0
  [0x1D2] Offset to Stream Name: 0
  [0x1D6] Attribute ID: 4
  [0x1D8] Resident Content Size: 90
  [0x1DC] Resident Content Offset: 24
  [0x1E0] Reparse Point Tag Value: 0xA000000C
    [0x1E0] Reparse Point Filter: IO_REPARSE_TAG_SYMLINK
      bit [0] - Microsoft Tag: True
      bit [1] - High Latency: False
      bit [2] - Name surrogate: True
      bit [3] - Directory can have children: False
    [0x1E0] Reparse Point usage: Symbolic link
    [0x1E4] Size of Reparse Data: 82
    [0x1E8] Offset to Substitute name: 0
    [0x1EA] Substitute Name Length: 36
    [0x1EC] Offset to Print Name: 38
    [0x1EE] Print Name Length: 28
    [0x1F0] Flag: Full path name (0x00000000)
    [0x1F4] Substitute Name: \??\C:\ProgramData
    [0x21A] Print Name: C:\ProgramData
```

Junction/Mount Point

```
[0x1D0] ID: 00004, Type: C0000000 - $Reparse_Point
  [0x1D4] Attribute Length: 120
  [0x1D8] Attribute Non-Resident Status: Resident
  [0x1D9] Length of Stream Name: 0
  [0x1DA] Offset to Stream Name: 0
  [0x1DE] Attribute ID: 4
  [0x1E0] Resident Content Size: 92
  [0x1E4] Resident Content Offset: 24
  [0x1E8] Reparse Point Tag Value: 0xA0000003
    [0x1E8] Reparse Point Filter: IO_REPARSE_TAG_MOUNT_POINT
      bit [0] - Microsoft Tag: True
      bit [1] - High Latency: False
      bit [2] - Name surrogate: True
      bit [3] - Directory can have children: False
    [0x1E8] Reparse Point usage: Junction or mount point
    [0x1EC] Size of Reparse Data: 84
    [0x1F0] Offset to Substitute name: 0
    [0x1F2] Substitute Name Length: 40
    [0x1F4] Offset to Print Name: 42
    [0x1F6] Print Name Length: 32
    [0x1F8] Substitute Name: \??\C:\Users\Default
    [0x222] Print Name: C:\Users\Default
```

Win10/11 Sandbox: IO_REPARSE_TAG_WCI#

```
[0x248] ID: 00007, Type: C0000000 - $Reparse_Point
   [0x24C] Attribute Length: 64
   [0x250] Attribute Non-Resident Status: Resident
   [0x251] Length of Stream Name: 0
   [0x252] Offset to Stream Name: 0
   [0x256] Attribute ID: 7
   [0x258] Resident Content Size: 34
   [0x25C] Resident Content Offset: 24
   [0x260] Reparse Point Tag Value: 0x80000018
      bit [0] - Is Microsoft tag set: True
      bit [1] - Is High Latency set: False
      bit [2] - Is Name surrogate set: False
      bit [3] - Can have children set: False
      Reparse Point Tag: IO_REPARSE_TAG_WCI
      [0x268] WCI Version: 1
      [0x26C] WCI Identifier: 5014FC54-7460-A7E8-46BB-CCD18183ECE9
      [0x280] WCI Name Size: 0
   [0x260] Reparse Point usage: Windows Container Isolation (WCI)
   [0x264] Size of Reparse Data: 26
   [0x266] Resident Content
```

```
[0x298] ID: 00004, Type: C0000000 - $Reparse_Point
   [0x29C] Attribute Length: 96
   [0x2A0] Attribute Non-Resident Status: Resident
   [0x2A1] Length of Stream Name: 0
   [0x2A2] Offset to Stream Name: 0
   [0x2A6] Attribute ID: 4
   [0x2A8] Resident Content Size: 66
   [0x2AC] Resident Content Offset: 24
   [0x2B0] Reparse Point Tag Value: 0x80000018
      bit [0] - Is Microsoft tag set: True
      bit [1] - Is High Latency set: False
      bit [2] - Is Name surrogate set: False
      bit [3] - Can have children set: False
      Reparse Point Tag: IO_REPARSE_TAG_WCI
      [0x2B8] WCI Version: 1
      [0x2BC] WCI Identifier: E56E0644-DBA6-80ED-49FC-3627C5770FA6
      [0x2D0] WCI Name Size: 32
      [0x2D2] WCI Name: Microsoft Shared
   [0x2B0] Reparse Point usage: Windows Container Isolation (WCI)
   [0x2B4] Size of Reparse Data: 58
   [0x2B6] Resident Content
```

```
[0x160] ID: 00003, Type: C0000000 - $Reparse_Point
   [0x164] Attribute Length: 120
   [0x168] Attribute Non-Resident Status: Resident
   [0x169] Length of Stream Name: 0
   [0x16A] Offset to Stream Name: 0
   [0x16E] Attribute ID: 3
   [0x170] Resident Content Size: 92
   [0x174] Resident Content Offset: 24
   [0x178] Reparse Point Tag Value: 0x90001018
      bit [0] - Is Microsoft tag set: True
      bit [1] - Is High Latency set: False
      bit [2] - Is Name surrogate set: False
      bit [3] - Can have children set: True
      Reparse Point Tag: IO_REPARSE_TAG_WCI_1
      [0x180] WCI Version: 1
      [0x184] WCI Identifier: 67EE9E3F-7507-B2B9-42EB-279B1B3979C8
      [0x198] WCI Name Size: 58
      [0x19A] WCI Name: Windows\System32\kerberos.dll
   [0x178] Reparse Point usage: Windows Container Isolation (WCI)
   [0x17C] Size of Reparse Data: 84
   [0x17E] Resident Content
```

```
[0x160] ID: 00003, Type: C0000000 - $Reparse_Point
   [0x164] Attribute Length: 104
   [0x168] Attribute Non-Resident Status: Resident
   [0x169] Length of Stream Name: 0
   [0x16A] Offset to Stream Name: 0
   [0x16E] Attribute ID: 3
   [0x170] Resident Content Size: 74
   [0x174] Resident Content Offset: 24
   [0x178] Reparse Point Tag Value: 0xA0001027
      bit [0] - Is Microsoft tag set: True
      bit [1] - Is High Latency set: True
      bit [2] - Is Name surrogate set: True
      bit [3] - Can have children set: False
      Reparse Point Tag: IO_REPARSE_TAG_WCI_LINK_1
      [0x180] WCI Version: 1
      [0x184] WCI Identifier: C2DA8087-944A-BF9A-4CA5-40B08264F677
      [0x198] WCI Name Size: 40
      [0x19A] WCI Name: Windows\explorer.exe
   [0x178] Reparse Point usage: Windows Container Isolation (WCI)
   [0x17C] Size of Reparse Data: 66
   [0x17E] Resident Content
```

IO_REPARSE_TAG_WOF: Related to 'WofCompressedData' ADS and Compress.exe

https://docs.microsoft.com/en-us/windows-hardware/manufacture/desktop/compact-os

```
[0x2C0] Reparse Point Tag Value: 0x80000017
  [0x2C0] Reparse Point Filter: IO_REPARSE_TAG_WOF
  [0x2C0] Reparse Point usage: Windows Overlay Filter (WOF)
  [0x2C4] Size of Reparse Data: 16
  [0x2C8] WOF Version: 1.0
  [0x2CC] WOF Provider: File
  [0x2D0] WOF Provider Version: 1.0
  [0x2D4] WOF Compression Format: XPRESS8K
```

From Win10/11 OneDrive folder:

Structure unknown yet: IO_REPARSE_TAG_CLOUD#

```
[0x2D0] ID: 00010, Type: C0000000 - $Reparse_Point
  [0x2D4] Attribute Length: 192
  [0x2D8] Attribute Non-Resident Status: Resident
  [0x2D9] Length of Stream Name: 0
  [0x2DA] Offset to Stream Name: 0
  [0x2DE] Attribute ID: 10
  [0x2E0] Resident Content Size: 168
  [0x2E4] Resident Content Offset: 24
  [0x2E8] Reparse Point Tag Value: 0x9000E01A
    bit [0] - Is Microsoft tag set: True
    bit [1] - Is High Latency set: False
    bit [2] - Is Name surrogate set: False
    bit [3] - Can have children set: True
    [0x2E8] Reparse Point Tag: IO_REPARSE_TAG_CLOUD_E
  [0x2E8] Reparse Point usage: Cloud Files filter
  [0x2EC] Size of Reparse Data: 160
  [0x2F0] Resident Content
```

```
[0x1E0] ID: 00004, Type: C0000000 - $Reparse_Point
  [0x1E4] Attribute Length: 264
  [0x1E8] Attribute Non-Resident Status: Resident
  [0x1E9] Length of Stream Name: 0
  [0x1EA] Offset to Stream Name: 0
  [0x1EE] Attribute ID: 4
  [0x1F0] Resident Content Size: 235
  [0x1F4] Resident Content Offset: 24
  [0x1F8] Reparse Point Tag Value: 0x9000401A
    bit [0] - Is Microsoft tag set: True
    bit [1] - Is High Latency set: False
    bit [2] - Is Name surrogate set: False
    bit [3] - Can have children set: True
    [0x1F8] Reparse Point Tag: IO_REPARSE_TAG_CLOUD_4
  [0x1F8] Reparse Point usage: Cloud Files filter
  [0x1FC] Size of Reparse Data: 227
  [0x200] Resident Content
```

```
[0x1D8] ID: 00072, Type: C0000000 - $Reparse_Point
   [0x1DC] Attribute Length: 152
   [0x1E0] Attribute Non-Resident Status: Resident
   [0x1E1] Length of Stream Name: 0
   [0x1E2] Offset to Stream Name: 0
   [0x1E6] Attribute ID: 72
   [0x1E8] Resident Content Size: 128
   [0x1EC] Resident Content Offset: 24
   [0x1F0] Reparse Point Tag Value: 0x9000601A
      bit [0] - Is Microsoft tag set: True
      bit [1] - Is High Latency set: False
      bit [2] - Is Name surrogate set: False
      bit [3] - Can have children set: True
      [0x1F0] Reparse Point Tag: IO_REPARSE_TAG_CLOUD_6
   [0x1F0] Reparse Point usage: Cloud Files filter
   [0x1F4] Size of Reparse Data: 120
   [0x1F8] Resident Content
```

```
[0x368] ID: 00044, Type: C0000000 - $Reparse_Point
   [0x36C] Attribute Length: 144
   [0x370] Attribute Non-Resident Status: Resident
   [0x371] Length of Stream Name: 0
   [0x372] Offset to Stream Name: 0
   [0x376] Attribute ID: 44
   [0x378] Resident Content Size: 116
   [0x37C] Resident Content Offset: 24
   [0x380] Reparse Point Tag Value: 0x9000701A
      bit [0] - Is Microsoft tag set: True
      bit [1] - Is High Latency set: False
      bit [2] - Is Name surrogate set: False
      bit [3] - Can have children set: True
      Reparse Point Tag: IO_REPARSE_TAG_CLOUD_7
   [0x380] Reparse Point usage: Cloud Files filter
   [0x384] Size of Reparse Data: 108
   [0x386] Resident Content
```

IO_REPARSE_TAG_APPEXECLINK: UWP app

```
[0x138] Reparse Point Tag Value: 0x8000001B
   [0x138] Reparse Point Filter: IO_REPARSE_TAG_APPEXECLINK
   [0x138] Reparse Point usage: Universal Windows Platform (UWP)
   [0x13C] Size of Reparse Data: 464
   [0x140] AppExecLink Version: 3
   [0x144] Package ID: Microsoft.DesktopAppInstaller_8wekyb3d8bbw⬚
   [0x19C] Entry Point: Microsoft.DesktopAppInstaller_8wekyb3d8bbwe!PythonRedirector
   [0x216] Executable: C:\Program Files\WindowsApps\Microsoft.DesktopAppInstaller_1.0.
   [0x30C] Application Type: Desktop bridge application
```

full executable in the above Reparse Point is:
" C:\Program Files\WindowsApps\Microsoft.DesktopAppInstaller_1.0.30251.0_x64__8wekyb3d8bbwe\AppInstallerPythonRedirector.exe"

IO_REPARSE_TAG_APPEXECLINK: Desktop bridge application

```
[0x1C0] Reparse Point Tag Value: 0x8000001B
  [0x1C0] Reparse Point Filter: IO_REPARSE_TAG_APPEXECLINK
      bit [0] - Microsoft Tag: True
      bit [1] - High Latency: False
      bit [2] - Name surrogate: False
      bit [3] - Directory can have children: False
  [0x1C0] Reparse Point usage: Universal Windows Platform (UWP)
  [0x1C4] Size of Reparse Data: 272
  [0x1C8] AppExecLink Version: 3
  [0x1CC] Package ID: Microsoft.MicrosoftEdge_8wekyb3d8bbw▯
  [0x218] Entry Point: Microsoft.MicrosoftEdge_8wekyb3d8bbwe!MicrosoftEdge
  [0x280] Executable: C:\Windows\system32\SystemUWPLauncher.exe
  [0x2D4] Application Type: UWP application
```

Structure unknown yet: IO_REPARSE_TAG_DFS

```
[0x150] ID: 00003, Type: C0000000 - $Reparse_Point
  [0x154] Attribute Length: 32
  [0x158] Attribute Non-Resident Status: Resident
  [0x159] Length of Stream Name: 0
  [0x15A] Offset to Stream Name: 0
  [0x15E] Attribute ID: 3
  [0x160] Resident Content Size: 8
  [0x164] Resident Content Offset: 24
  [0x168] Reparse Point Tag Value: 0x8000000A
      bit [0] - Is Microsoft tag set: True
      bit [1] - Is High Latency set: False
      bit [2] - Is Name surrogate set: False
      bit [3] - Can have children set: False
      Reparse Point Tag: IO_REPARSE_TAG_DFS
  [0x168] Reparse Point usage: Distributed File System (DFS)
  [0x16C] Size of Reparse Data: 0
  [0x16E] Resident Content
```

From the WSL 1/2 folders:

```
[0x120] ID: 00003, Type: C0000000 - $Reparse_Point
    [0x124] Attribute Length: 48
    [0x128] Attribute Non-Resident Status: Resident
    [0x129] Length of Stream Name: 0
    [0x12A] Offset to Stream Name: 0
    [0x12E] Attribute ID: 3
    [0x130] Resident Content Size: 24
    [0x134] Resident Content Offset: 24
    [0x138] Reparse Point Tag Value: 0x80000023
        bit [0] - Is Microsoft tag set: True
        bit [1] - Is High Latency set: False
        bit [2] - Is Name surrogate set: False
        bit [3] - Can have children set: False
        [0x138] Reparse Point Tag: IO_REPARSE_TAG_AF_UNIX
    [0x138] Reparse Point usage: WSL to represent a UNIX domain socket
    [0x13C] Size of Reparse Data: 0
    [0x140] Resident Content
```

```
[0x118] ID: 00003, Type: C0000000 - $Reparse_Point
    [0x11C] Attribute Length: 56
    [0x120] Attribute Non-Resident Status: Resident
    [0x121] Length of Stream Name: 0
    [0x122] Offset to Stream Name: 0
    [0x126] Attribute ID: 3
    [0x128] Resident Content Size: 31
    [0x12C] Resident Content Offset: 24
    [0x130] Reparse Point Tag Value: 0xA000001D
        bit [0] - Is Microsoft tag set: True
        bit [1] - Is High Latency set: True
        bit [2] - Is Name surrogate set: True
        bit [3] - Can have children set: False
        [0x130] Reparse Point Tag: IO_REPARSE_TAG_LX_SYMLINK
        [0x138] Flags: 0x02000000
        [0x13C] SymLink Target: ../Pacific/Pitcairn
    [0x130] Reparse Point usage: WSL to represent a UNIX symbolic link
    [0x134] Size of Reparse Data: 23
    [0x138] Resident Content
```

```
[0x118] ID: 00003, Type: C0000000 - $Reparse_Point
  [0x11C] Attribute Length: 32
  [0x120] Attribute Non-Resident Status: Resident
  [0x121] Length of Stream Name: 0
  [0x122] Offset to Stream Name: 0
  [0x126] Attribute ID: 3
  [0x128] Resident Content Size: 8
  [0x12C] Resident Content Offset: 24
  [0x130] Reparse Point Tag Value: 0x80000025
    bit [0] - Is Microsoft tag set: True
    bit [1] - Is High Latency set: False
    bit [2] - Is Name surrogate set: False
    bit [3] - Can have children set: False
    [0x130] Reparse Point Tag: IO_REPARSE_TAG_LX_CHR
  [0x130] Reparse Point usage: WSL to represent a UNIX character special file
  [0x134] Size of Reparse Data: 0
  [0x138] Resident Content
```