Hyper-V components (Windows 10 19H1)

```
WDAG special:
hvsifltr.sys - Windows Defender Application Guard Filter Driver
                                    - VmSwitch Extensibility Filter
          vmswitch.sys
                                    - VMSWITCH Proxy Driver
                                    - VmSwitch NIC Proxy Driver
                                    - Network driver for bridging packets between mbb, wifi, and ethernet networks
- Microsoft Azure VFP Extension
         NdisVirtualBus.sys (guest)- Microsoft Virtual Network Adapter Enumerator
 Windows Container:
                                    - Windows Container Isolation FS Filter Driver
        wcifs.sys
 Hyper-V sockets:
         hvsocketcontrol.sys - Microsoft Hyper-V Socket Provider Control Driver
         hvsocket.sys (host, guest)- Microsoft Hyper-V Socket Provider
 Hyper-V storage:
                                    - Storage Vsp Driver- Storage VSP Parser (regestered calling storvsp!VstorRegisterParser)
                                    - Native VHD parser
        pvhdparser.sys
vpcivsp.sys
                                    - Virtual PCI VSP Driver (Microsoft Hyper-V PCI Server)
                                    - Storage VSC Driver
 Hyper-V vmbus:
         vmbkmcl.sys (guest)
                                    - Hyper-V VMBus KMCL
                                    - Microsoft Hyper-V Virtual Machine Bus Root Driver
- Microsoft Hyper-V Virtual Machine Bus Child Driver
         vmbusr.sys
         VMBusHID.sys (guest) - Microsoft VMBus HID Miniport
 Hyper-V devices (guest):
                                    - Microsoft VMBus Synthetic Keyboard Driver
- Microsoft VMBus Video Device Miniport Driver (Microsoft Hyper-V Video device)
         hyperkbd.sys
         HyperVideo.sys
 Hyper-V core
                                    - Windows Hypervisor Root Interface Driver
                                    - Windows Hypervisor Guest Interface Driver
- Microsoft Hyper-V Virtualization Infrastructure Driver
         winhv.sys (guest)
                                    - Hypervisor Boot Driver
                                    - Hyper-V Crashdump (guest device "Microsoft Hyper-V Crashdump driver")
         hvcrash.svs (guest)
         vhdmp.sys - VHD Miniport Driver
vmgencounter.sys (guest)- Virtual Machine Generation Counter
                                  - Virtual machine guest infrastructure driver
 Hyper-V core (installed only with full Hyper-V role):
                                    - Microsoft PCI Proxy Driver
         ramparser.sys
                                    - Hyper-V Secure Virtualization Component module
                                    - lun parser
Hyper-V core (Windows 10 20H1):
          vkrnlintvsc.sys (guest) - Microsoft Hyper-V NT Kernel Integration VSC Driver
                                    - Microsoft Hyper-V NT Kernel Integration VSP Driver
```

DAG special:	
VDAG special:	Hyman V Hast Naturally Carrian Diagnostics Teel
hnsdiag.exe	- Hyper-V Host Network Service Diagnostics Tool
hvsimgr.exe	- Windows Defender Application Guard Manager
hvsiproxyapp.exe	- No information
hvsirdpclient.exe	- Windows Defender Application Guard Manager RDP Client
hvsirpcd.exe	- Windows Defender Application Guard Proxy services
hvsievaluator.exe	- Windows Defender Application Guard Policy evaluator
	e - Run inside WDAG. Apply HVSI settings.
wdagtool.exe (tool)	- Tool for reset\suspend\resume WDAG container
Containers:	
CExecSvc.exe	- Container Execution Agent
cmdiag.exe	- Container Manager Diagnostics Tool
cmimageworker.exe	- Container image worker process
vmcompute.exe	- Hyper-V Host Compute Service
VmComputeAgent.exe	- Hyper-V Guest Compute Service
wcsetupagent.exe	- Utility VM Setup Agent
hcsdiag.exe (tool)	- Hyper-V Host Compute Service Diagnostics Tool
Hyper-V network:	
vfpctrl.exe (tool)	- VFP control and diagnostics utility
nmbind.exe (tool)	- Hyper-V Network Core Bind Application
nmscrub.exe (tool)	- Display information about VMSwitch
nvspinfo.exe (tool)	- Display information about Vmswitch
Hvapimo.exe (tooi)	Bispary information about vinswitch
Hyper-V Core	
vmwp.exe	- Virtual Machine Worker Process
Vindows Sandbox special:	
Windows Sandbox.exe	- Windows Sandbox launcher
Hyper-V Core (installed only v	
hvc.exe (tool)	- Hyper-V Command Line Tool
hnsdiag.exe	- Hyper-V Host Network Service Diagnostics Tool
rdvgm.exe	- RemoteFX Desktop Virtual Graphics Manager
vmplatformca.exe	- Hyper-V Certificate Authority Trustlet
vmsp.exe	- Virtual Machine Security Process
vmconnect.exe	- Virtual Machine Connection
TIMO MAC ATTA	Virtual Machina Managament Carriag

```
Created

CmService - Container Manager Service
gcs - Hyper-V Guest Compute Service
hns - Host Network Service
hvsics - Application Guard Container Service
nvagent - Network Virtualization Service
vmcompute - Hyper-V Host Compute Service

Started

HvHost - HV Host Service
gpsvc - Group Policy Client (PC is not domain joined)

Hyper-V Core (installed only with full Hyper-V role) created:
HgClientService - Host Guardian Client Service
vmms - Hyper-V Virtual Machine Management
HvHost - HV Host Service
```

- Virtual Machine Management Service

```
Libraries:
 ysWOW64 WDAG modules:
                                                                                  Windows Defender Application Guard Container Service
                                                                                   Windows Defender Application Guard Proxy Stub Dll
             hvsimgrps.dll
             hvsiofficeiconoverlayshellextension.dll
                                                                                   Microsoft Office inside WDAG auxiliary library
WDAG Special:
                                                                                  Windows Defender Application Guard Container Service
HVSI DVC (dynamic virtual channel) library. Used by hvsirdpclient.exe
             hvsiDspdvcclient.dll
                                                                                  HVSI file trust lib. Used by hvsimgr.exe
            hvsifiletrust.dll
HvsiMachinePolicies.dll
                                                                                  Get settings for HVSI from registry
Windows Defender Application Guard Proxy Stub Dll
             hvsimgrps.dll
            hvsiofficeiconoverlayshellextension.dll
HvsiSettingsProvider.dll
                                                                                   Microsoft Office inside WDAG auxiliary library
Windows Defender Application Guard Hvsi Settings Provider.dll. Used
                                                                                   by hvsimgr.exe, hvsirdpclient.exe, HvsiSettingsWorker.exe,
             hvsigpext.dll
                                                                                   Windows Defender Application Guard Group Policy Extention
                                                                                  HVSI audit settings provider dll (Microsoft.Windows.HVSI.AuditSettings)
Windows Sandbox special:
            madrid.dll
                                                                                   Madrid Client Library
Windows container:
                                                                                  Windows Container Manager client library
Hyper-V Host Compute Service Library
             cmclient.dll
             vmcompute.dll
                                                                                  Hyper-V Compute Event Log Resource Dll
Hyper-V Compute Component Proxy
Host Network Service proxy library
             vmcomputeeventlog.dll
            VmComputeProxy.dll
hnsproxy.dll
            HostNetSvc.dll
                                                                                  Host Network Service
                                                                                  Container Manager Service
             CmService.dll
                                                                                   Hyper-V Host Compute Service Storage Library
             computestorage.dll
Hyper-V Network:
                                                                                  Host Network Management
             NetMgmtIF.dll
             NvAgent.dll
                                                                                   Hyper-V Virtual Switch Driver Interface Library
                                                                                   Hyper-V Virtual Switch Driver Core Interface Library
             vmsifproxystub.dll
                                                                                   IVmsManagementEvents Interface Proxy/Stub
                                                                                  Microsoft Synthetic Network Card
Guest Network Service
             VmSynthNic.dll
Hyper-V devices:
                                                                                  Microsoft Dynamic Memory Controller
             vmdvnmem.dll
            vmflexio.dll
                                                                                   Microsoft Flexible IO Device
                                                                                  Virtual Machine Integration Service Core Devices
Microsoft Virtual Persistent Memory Controller
             vmpmem.dll
            vmserial.dll
vmsmb.dll
                                                                                   Microsoft Serial Device
                                                                                   Microsoft Virtual SMB Device
                                                                                  Microsoft Synthetic Storage Adapter
Microsoft VM UI Devices
            VrdUmed.dll
                                                                                   Virtual Render Device UMED
                                                                                  Microsoft VM Chipset Devices
Microsoft VM Chipset Devices
            gpupvdev.dll
vmchipset.dll
Hyper-V Core:
             ActivationVdev.dll
                                                                                  Loaded by vmwp.exe. Service guest Microsoft Hyper-V Activation
                                                                                   component virtual device
Microsoft Hyper-V Secure Boot Resources
             sbresources.dll
             rdp4vs.dll
                                                                                   Virtual Machine Remoting Services API
                                                                                  Utility VM Sysprep Plugin
VmBus User Mode Pipe DLL
             UtilityVmSysprep.dll
            vmbuspiper.dll
            VmCrashDump.dll
                                                                                   Microsoft VM Crash Dump Device
                                                                                  Hyper-V Component Proxy
            vmprox.dll
                                                                                  User-mode SRV
             vmvirtio.dll
                                                                                  Hyper-V Virtio Infrastructure
                                                                                   Virtual Machine Control Module
            vmwpctrl.dll
                                                                                   Hyper-V VMWP Event Log Resource Dll
             vmwpevents.dll
                                                                                  VM Filtering Platform User Mode API Library
Plan9 File System (Probably, WSL stuff, used by vmsmb.dll)
            vfpapi.dll
vp9fs.dll
 Hyper-V services (guest):
                                                                                   Virtual Machine Integration Component Service
                                                                                   Virtual Machine Integration Component Service
            icsvcext.dll
    er-V API Wrapper
                                                                                  Hyper-V Hypervisor User-Mode API Library
             winhvplatform.dll
                                                                                  Hyper-V Instruction Emulator User-Mode API Library
API Schema
             {GUID}_HyperV-ComputeLegacy.dll {GUID}_HyperV-ComputeStorage.dll
                                                                                   ApiSet Schema Extension DLL
                                                                                   ApiSet Schema Extension DLL
            {GUID}_HyperV-ComputeCore.dll
{GUID}_HyperV-ComputeNetwork.dll
{GUID}_HyperV-DeviceVirtualization.dll
                                                                                   ApiSet Schema Extension DLL
                                                                                   ApiSet Schema Extension DLL
                                                                                   ApiSet Schema Extension DLL
             {GUID}_HyperV-ComputeNetwork.dll
                                                                                   ApiSet Schema Extension DLL
Other Hyper-V related stuff:
                                                                                  Rdv Vm Transport Endpoints
Hyper-V Core (installed only with full Hyper-V role):
             C:\Windows\SysWOW64\RdvgmProxy.dll
                                                                                  RemoteFX Rdvgm COM proxy dll
                                                                                  (1 exported function – IsFeatureEnabled)
             C:\Windows\SysWOW64\vmstaging.dll
             HyperVSysprepProvider.dll
                                                                                   Part of Host Guardian Client Service. Used by hgsclientplugin.dll
            hgclientservice.dll
hgclientserviceps.dll
                                                                                  Host Guardian Client Service
                                                                                  Part of Host Guardian Client Service. Has COM interface
                                                                                  GUID IID_IHgAttestation and IID_IHgKeyProtection HostGuardian Client Plugin Attestation
                                                                                   WMIv2 Provider for the Host Guardian Service Client
             HgsClientWmi.dll
             HostGuardianServiceClientResources.dll
                                                                                   HostGuardianServiceClientResources
             NetMgmtIF.dll
                                                                                   Host Network Management
                                                                                  Virtual Machine Remoting Services API
Network Virtualization Agent.
            rdp4vs.dll
NvAgent.dll
                                                                                  Remote TPM Library
            RdvgmProxy.dll
RdvGpuInfo.dll
                                                                                  RemoteFX Rdvgm COM proxy dll
Microsoft RemoteFX GPU Info Library
            RemoteFileBrowse.dll
TpmEngUM.dll
                                                                                  Hyper-V remote file browser data source. TPM Win32 user-mode engine
             synth3dvideoproxy.dl1
                                                                                  RemoteFX COM proxy dll
                                                                                  (1 exported function – IsFeatureEnabled)
Microsoft Synthetic 3D Video Device
            vmstaging.dll
vmsynth3dvideo.dll
            vmsynthfcvdev.dll
                                                                                  Microsoft Synthetic Fibre Channel Adapter
            vmtpm.dll
VmDataStore.dll
                                                                                   Microsoft TPM Device
                                                                                  Microsoft Debug Device

Make allocation \unloading PCI device from pool
            vmdebug.dll
                                                                                  Microsoft VM Emulated Devices
Microsoft Emulated Network Card
            vmemulateddevices.dll
VmEmulatedNic.dll
VmEmulatedStorage.dll
                                                                                   Microsoft Emulated Storage
            vmhgs.dll
vmicrdv.dll
                                                                                  Hyper-V Host Guardian Service Client Library
                                                                                  Remote Desktop Services VDI Vdev
                                                                                  Virtual Machine Configuration Module
Virtual Machine Integration Service Devices
Hyper-V Virtual Machine Manager Proxy
            vsconfig.dll
             vmmsprox.dll
            C:\Program Files\Hyper-V\
                                                                                   VmConnect, Vhd attaching utility
```

```
Configs:

C:\Windows\System32\HvsiSettingsProviders\AuditPol_ContainerCreate.xml

C:\Windows\System32\HvsiSettingsProviders\AuditPol_ContainerRealtime.xml

C:\Windows\System32\HvsiSettingsProviders\HvsiMachinePolicies_ContainerCreate.xml

C:\Windows\System32\HvsiSettingsProviders\HvsiMachinePolicies_ContainerRealtime.xml

C:\Windows\System32\HvsiSettingsProviders\HvsiUserPolicies_ContainerCreate.xml

C:\Windows\System32\HvsiSettingsProviders\HvsiUserPolicies_ContainerRealtime.xml

C:\Windows\System32\HvsiSettingsProviders\WDATP_ContainerCreate.xml

C:\ProgramData\Microsoft\WDAG\CentemnialAppTemplates\MicrosoftCentennialOfficeWin32.xml

C:\ProgramData\Microsoft\WDAG\CentemnialAppTemplates\MicrosoftCentennialOfficeWin64.xml

Code Integrity settings. You can reconfigure CI inside WDAG container and can run any program if you replace file to another policy.

C:\Windows\System32\HvsiSettingsProviders\CodeIntegrity\SIPolicy.p7b

C:\Windows\System32\HvsiSettingsProviders\CodeIntegrity\SIPolicy_office.p7b
```

Hvsigpext.dll - Winlogon GP Extension Computer\HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\Winlogon\GPExtensions\\\\ 9650FDBC-053A-4715-AD14-FC2DC65E8330\\\. WDAG Policy Parameters: AllowHvsiCspTracker EnableClipboard EnableClipboard EnablePerinters EnableCameraMicrophoneRedirection EnablePersistence EnableVittualGPU AppHVSIClipboardSettings AppHVSIClipboardFileType AppHVSIPrintingSettings BlockNonEnterpriseContent AllowCameraMicrophoneRedirection AuditApplicationGuard AllowPersistence AllowVirtualGPU FileTrustCriteria FileTrustOriginRemovableMedia FileTrustOriginRemovableMedia FileTrustOriginRemovableMedia FileTrustOriginRemovableMedia FileTrustOriginMarkOfTheWeb

```
Many files inside WDAG opened with VSMB prefix:
 dbss.sys (Redirected Drive Buffering SubSystem Driver): \VSMB-{dcc079ae-60ba-4d07-847c-3493609c0870}\SharedMemory$
                         RxAcquireFileForNtCreateSection
RxCreateRxContext
                          RxWaitForStableLViewOnFcbAndAcquireRundown
 vcifs.sys (Windows Container Isolation FS Filter Driver): \Device\vmsmb\VSMB-{dcc079ae-60ba-4d07-847c-3493609c0870}\os\
                                                      RtlInitUnicodeString((v23 + 24), L"\Device\vmsmb\\\VSMB-\{dcc079ae-60ba-4d07-847c-3493609c0870\}\\\vmsmb\\\VSMB-\{dcc079ae-60ba-4d07-847c-3493609c0870\}\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\vmsmb\\\
                                                      FltGetVolumeFromName(Globals, v23 + 24, &v28);
FltGetVolumeInstanceFromName(Globals, v28, &::DestinationString, &v27)
FltAttachVolume(Globals, v28, &::DestinationString, &v27)
 toskrnl.exe: \Device\VMBus\{4d12e519-17a0-4ae4-8eaa-5270fc6abdb7}-{dcc079ae-60ba-4d07-847c-3493609c0870}-0000
  mcompute.exe (Hyper-V Host Compute Service): \\?\VMSMB\VSMB-{dcc079ae-60ba-4d07-847c-3493609c0870}\%ls ComputeService::HyperVContainer::BuildHostedContainerConfiguration
                        ComputeService::Management::ProxyUtils::ConvertRs4SettingsDocument
ComputeService::Management::Details::GetRs4GuestModifyRequest
ComputeService::ContainerDefinition::ApplyHiveStackSettings
                         ComputeService::Storage::BuildVSMBPipePath
ComputeService::ContainerUtilities::AddMappedPipe
                          Compute Service :: Container Utilities :: Attach Filter To Volume \\
VmComputeAgent.exe (Hyper-V Guest Compute Service): \\?\VMSMB\VSMB-{dcc079ae-60ba-4d07-847c-3493609c0870}\\%ls
                        ComputeService::ContainerUtilities::AddMappedPipe
ComputeService::ContainerUtilities::AttachFilterToVolume
                          Compute Service :: Container Definition :: Apply Hive Stack Settings \\
CmService.dll (Container Manager Service library): \\?\VMSMB\VSMB-{dcc079ae-60ba-4d07-847c-3493609c0870}\
Container::Manager::Hcs::Details::BuildVSMBPipePath
 dsdwmdr.dll ( Microsoft Remote Desktop Services Desktop Composition Component): \Device\vmsmb\VSMB-{dcc079ae-60ba-4d07-847c-3493609c0870}\SharedMemory$\
                         CreateVmSharedMemorySection
 dsxvmaudio.dll: \Device\vmsmb\VSMB-{dcc079ae-60ba-4d07-847c-3493609c0870}\SharedMemory$\
                        OpenVmSharedMemorySection2
```