



The bridge to possible

Understanding and Troubleshooting Webex VDI (Virtual Desktop Infrastructure)

Ying Ying Pu - Technical Leader
@CiscoCloudYing
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CISCO *Live!*

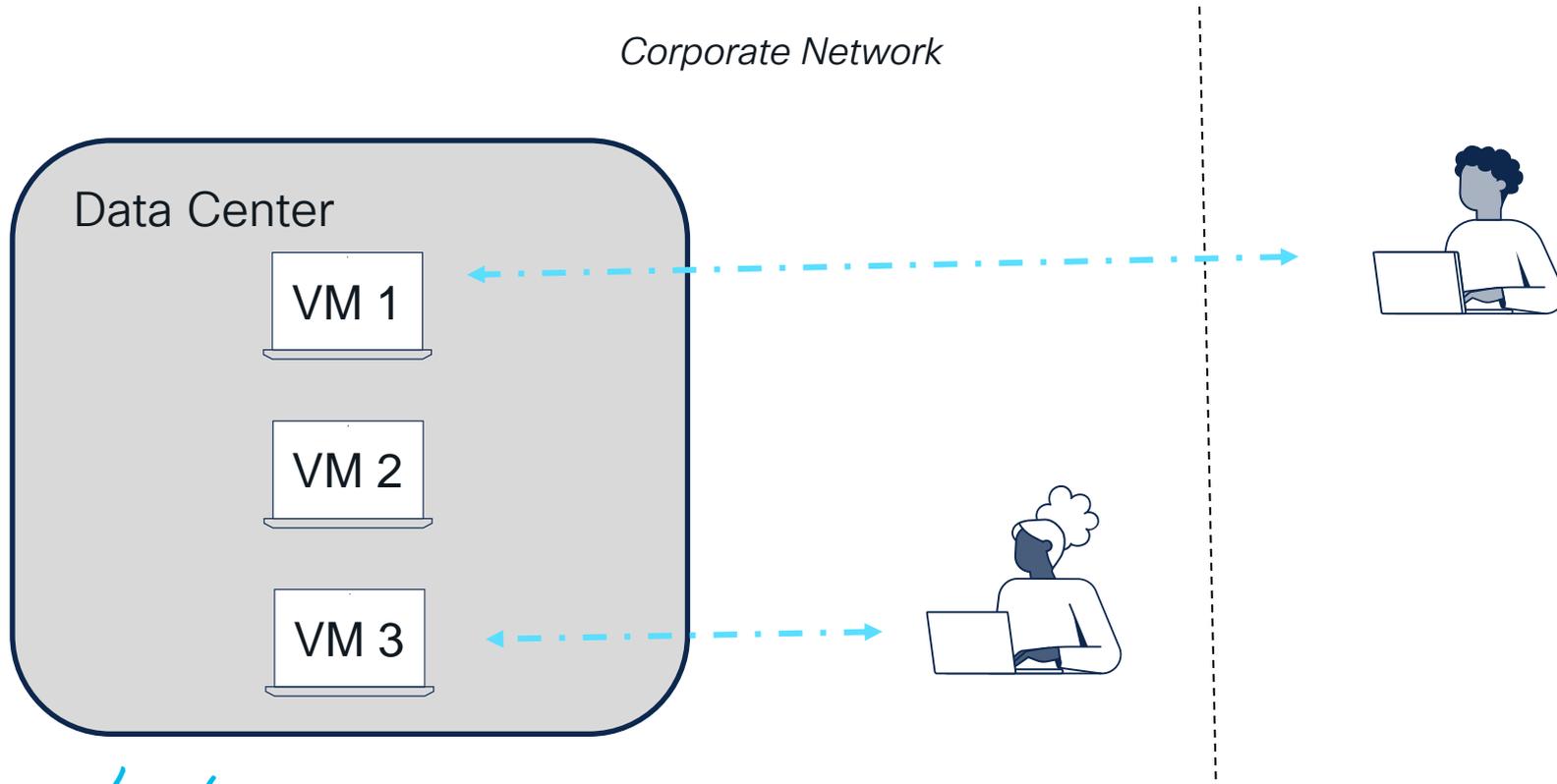
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Agenda

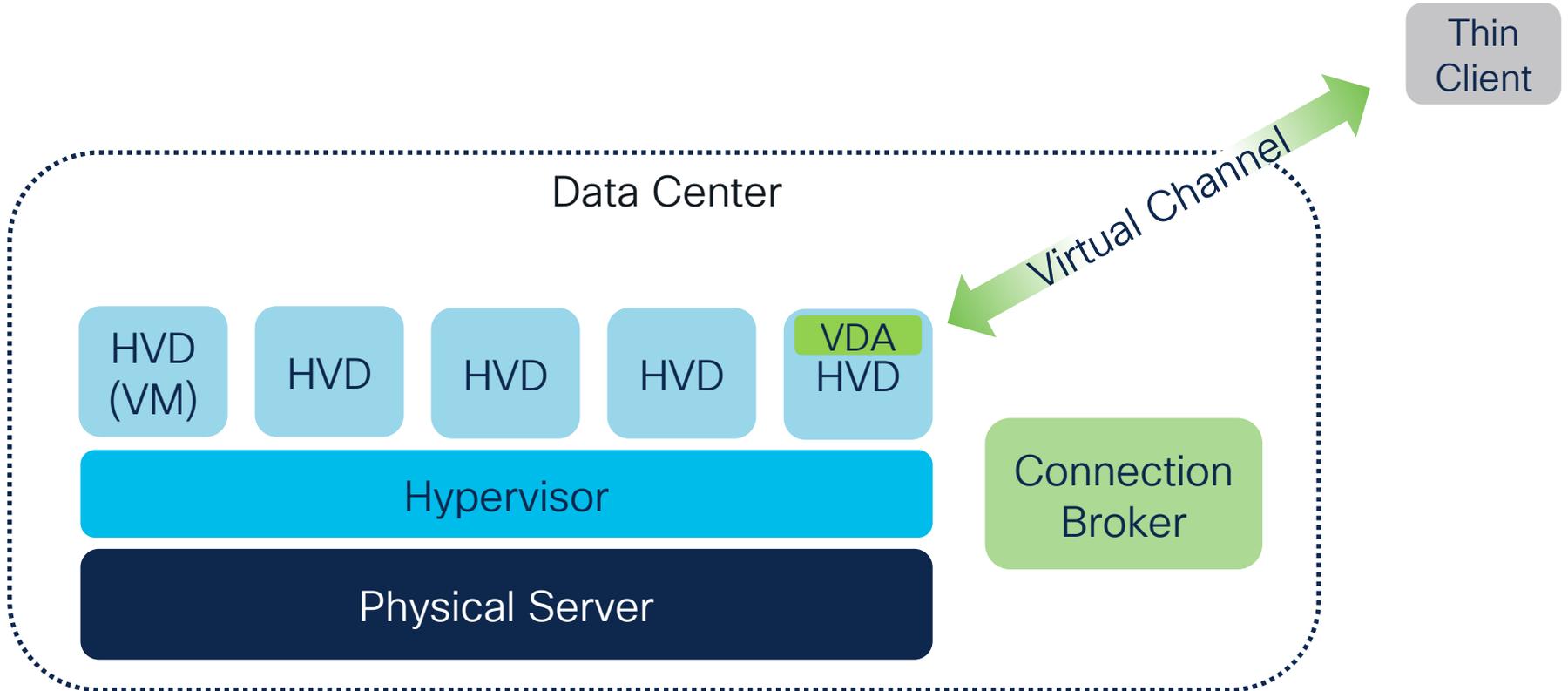
- What is VDI (Virtual Desktop Infrastructure)
- Webex VDI Overview
- Architecture
- System Requirements
- How to deploy Webex VDI
- Common Issue and Troubleshooting

What is VDI

Virtual Desktop Infrastructure



Architecture



Common Components

- **Compute system** - CPU, RAM, Network
- **Hypervisor** - Separate resource and create virtual machine.
- **HVD** - Hosted virtual desktop (VM)
- **Connection Broker** - Software that creates connections to HVD. It performs a number of tasks including the following:
 - Validating the username and providing a connection for the user.
 - Allowing the user to connect to a specific virtual desktop.
- **VDA** - Virtual delivery agent. Establish and manage the connection between HVD and thin client.
- **Thin Client** - Physical PC. Simple, low-performance PC, or normal PC.

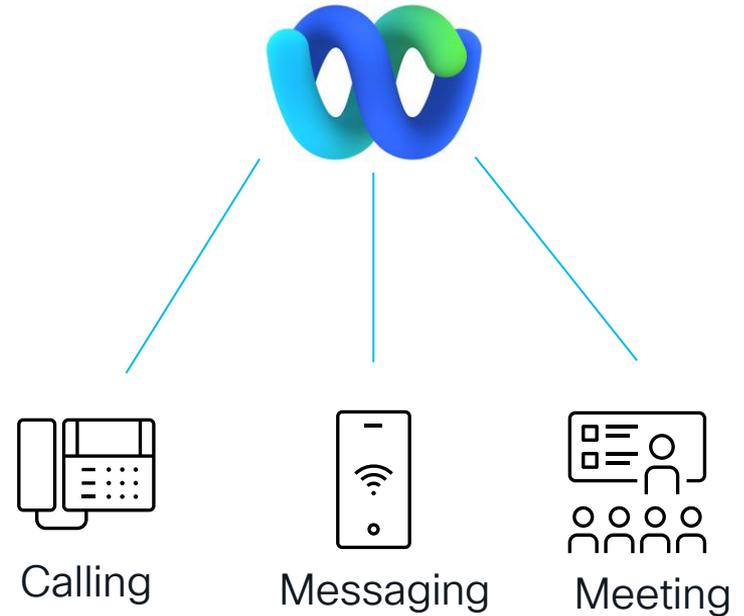
Benefits

- Flexibility
- Mobility
- Simplified management
- Enhanced security
- Cost saving

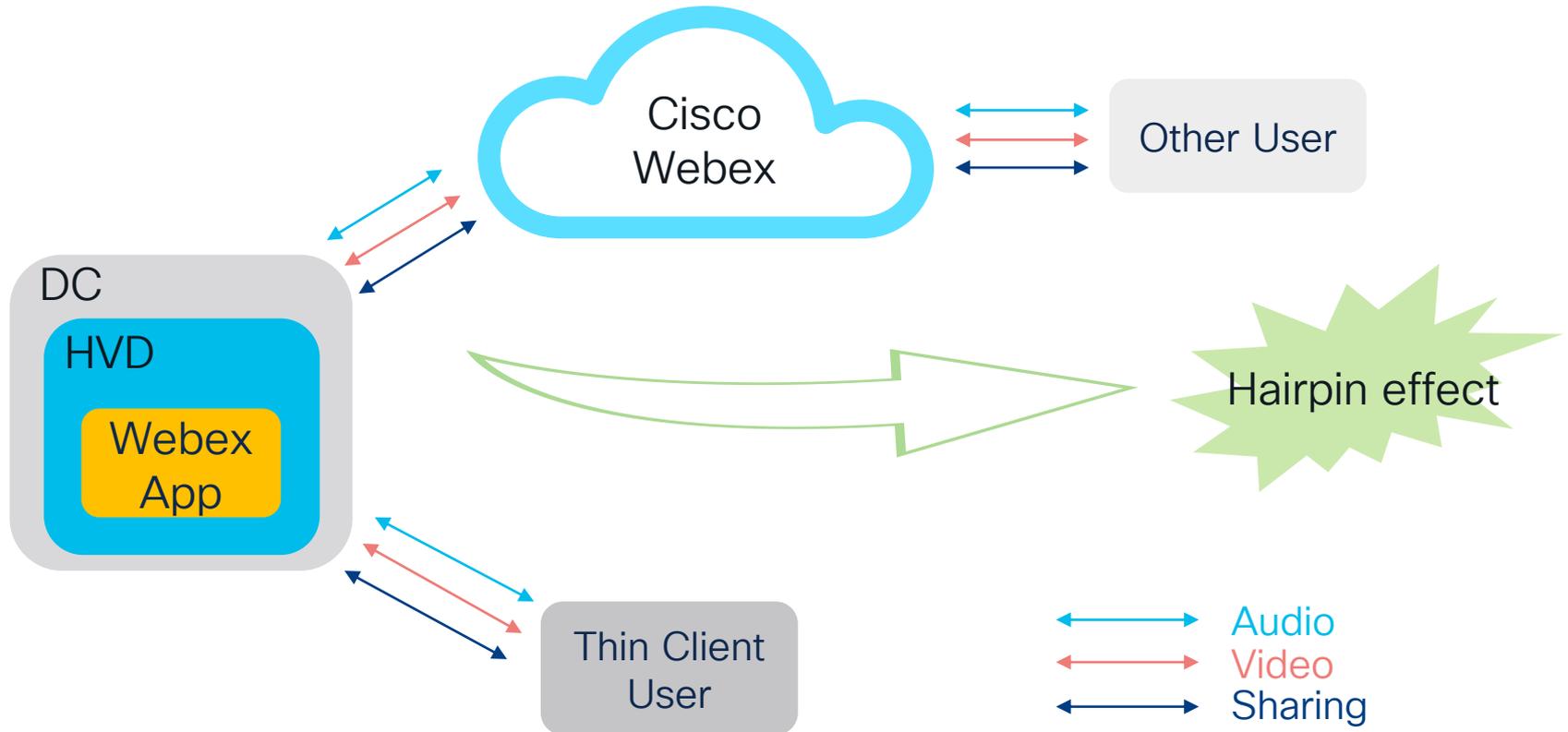
Webex VDI Overview

Overview

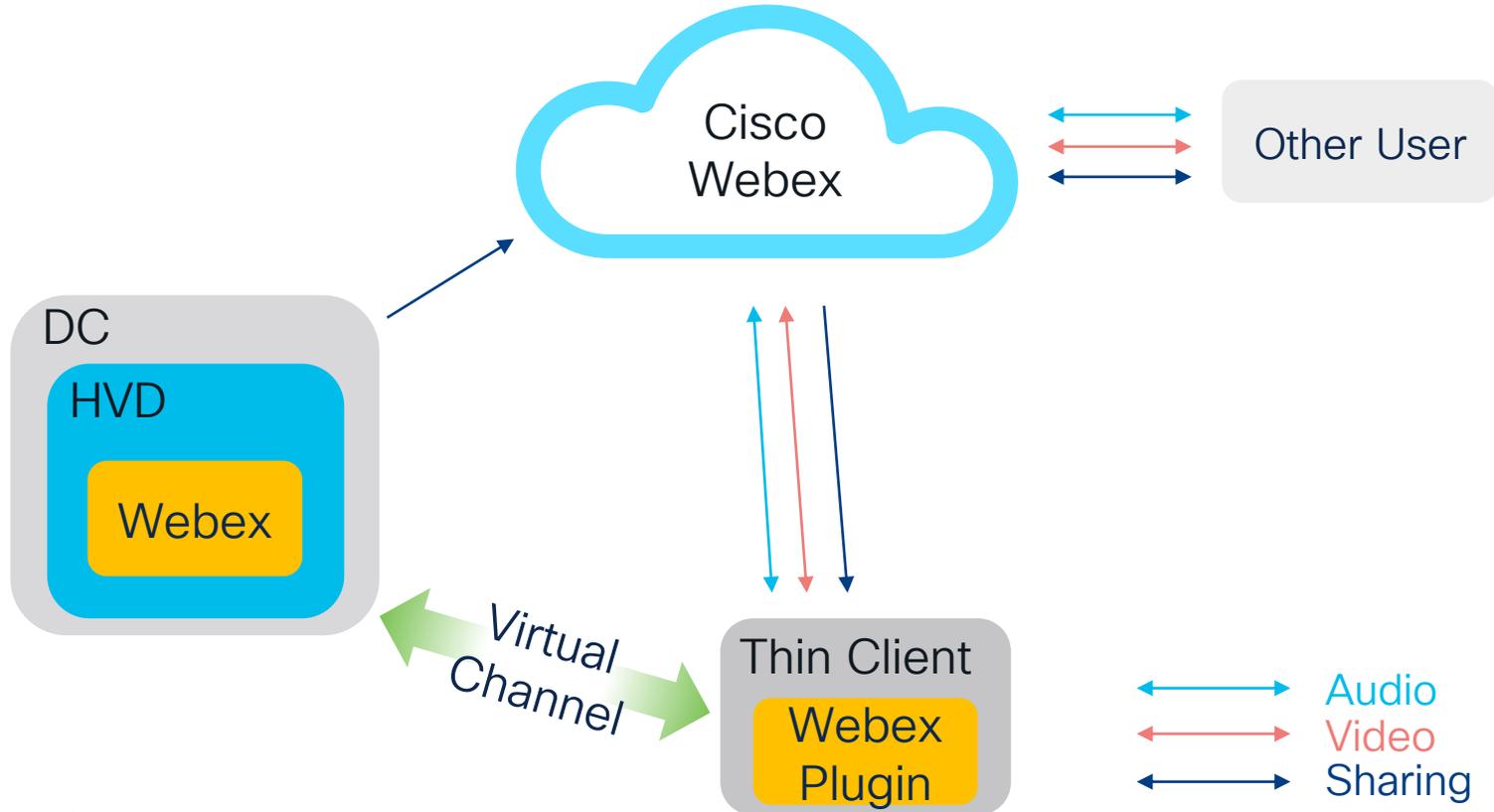
- Webex is a leading technology in collaboration market
- Combine calling, messaging, meeting together
- Webex VDI optimized for audio and video



Non-optimized



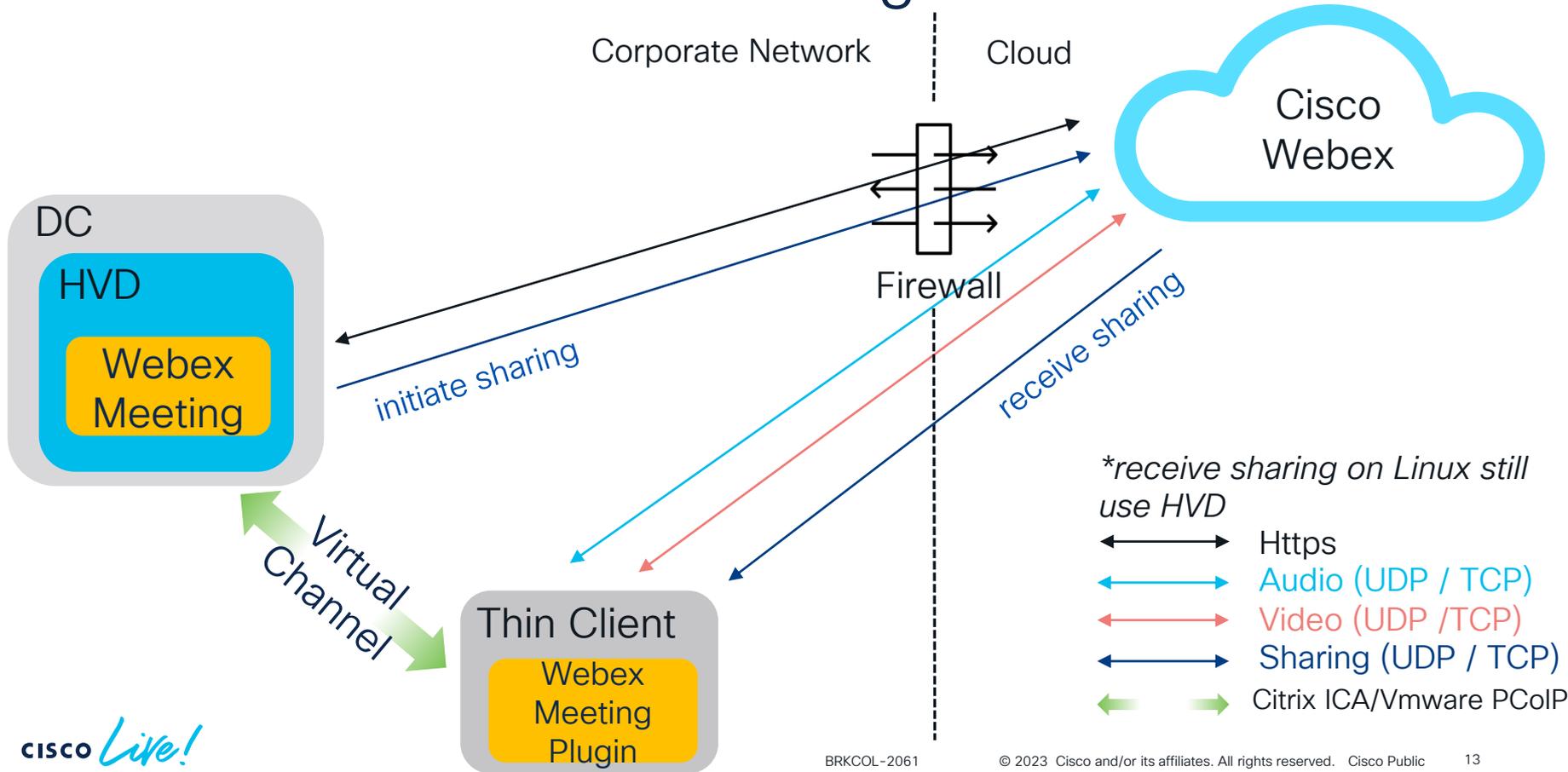
VDI Optimized for Media



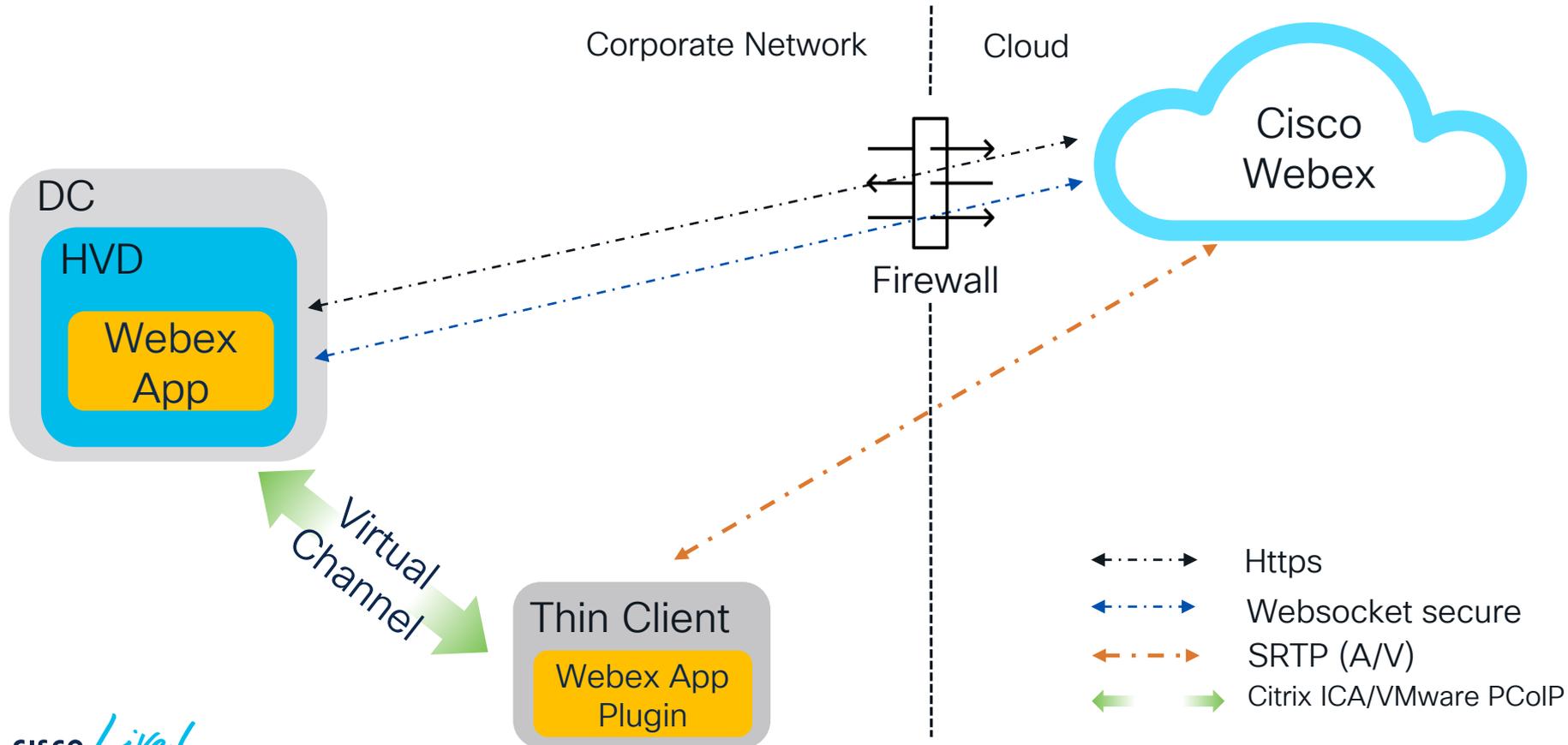
Webex VDI Components

- **HVD** – Hosted virtual desktop (VM)
- **Thin Client** – Physical device. Simple, low-performance PC, or normal PC.
- **Connection Broker & VDA** – Software that manages and creates connections to HVD.
- **Webex App** – Webex application installed on HVD.
- **Webex Plugin** – A piece of Webex software installed on thin client side.

Architecture – Webex Meeting



Architecture – Call on Webex

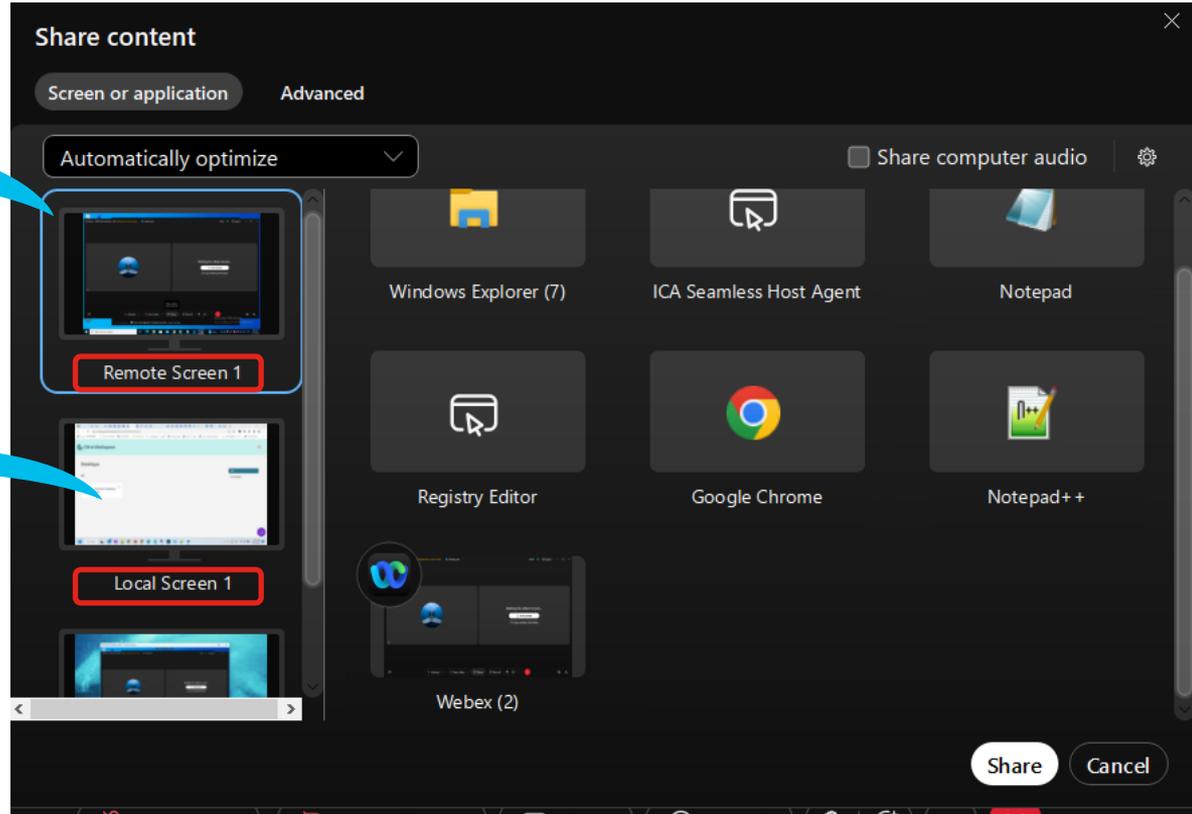


Sharing type from Webex app

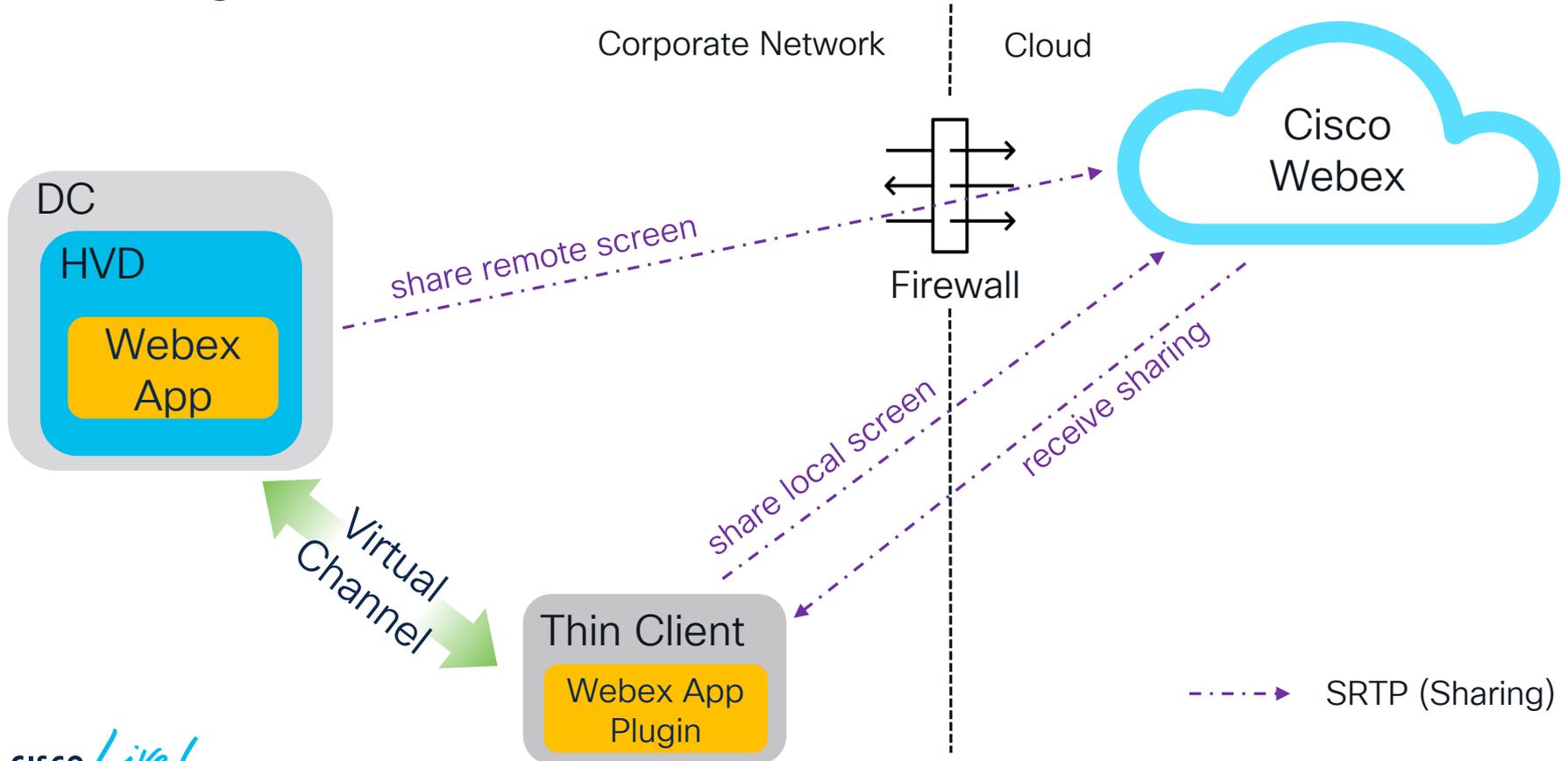
HVD screen



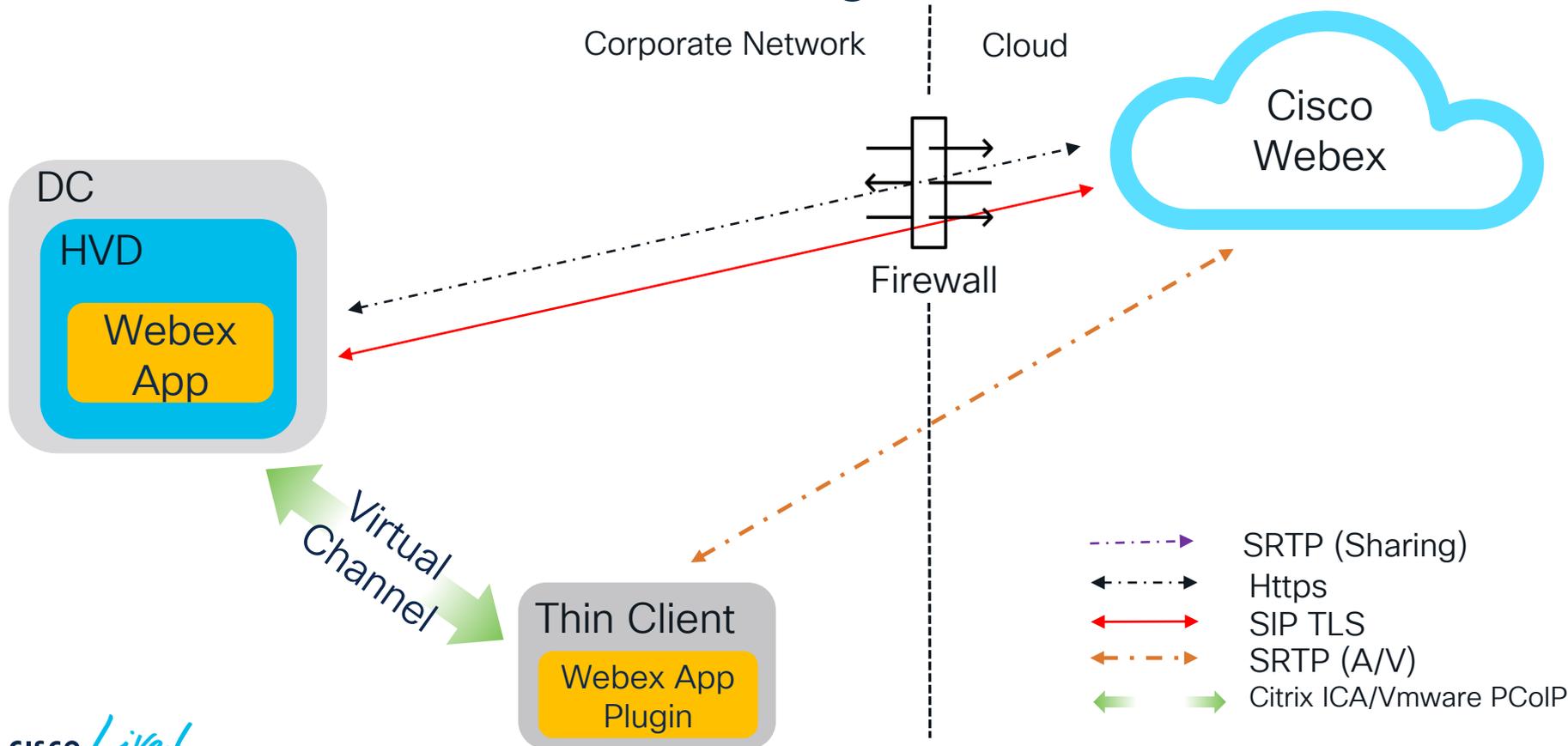
Thin client screen



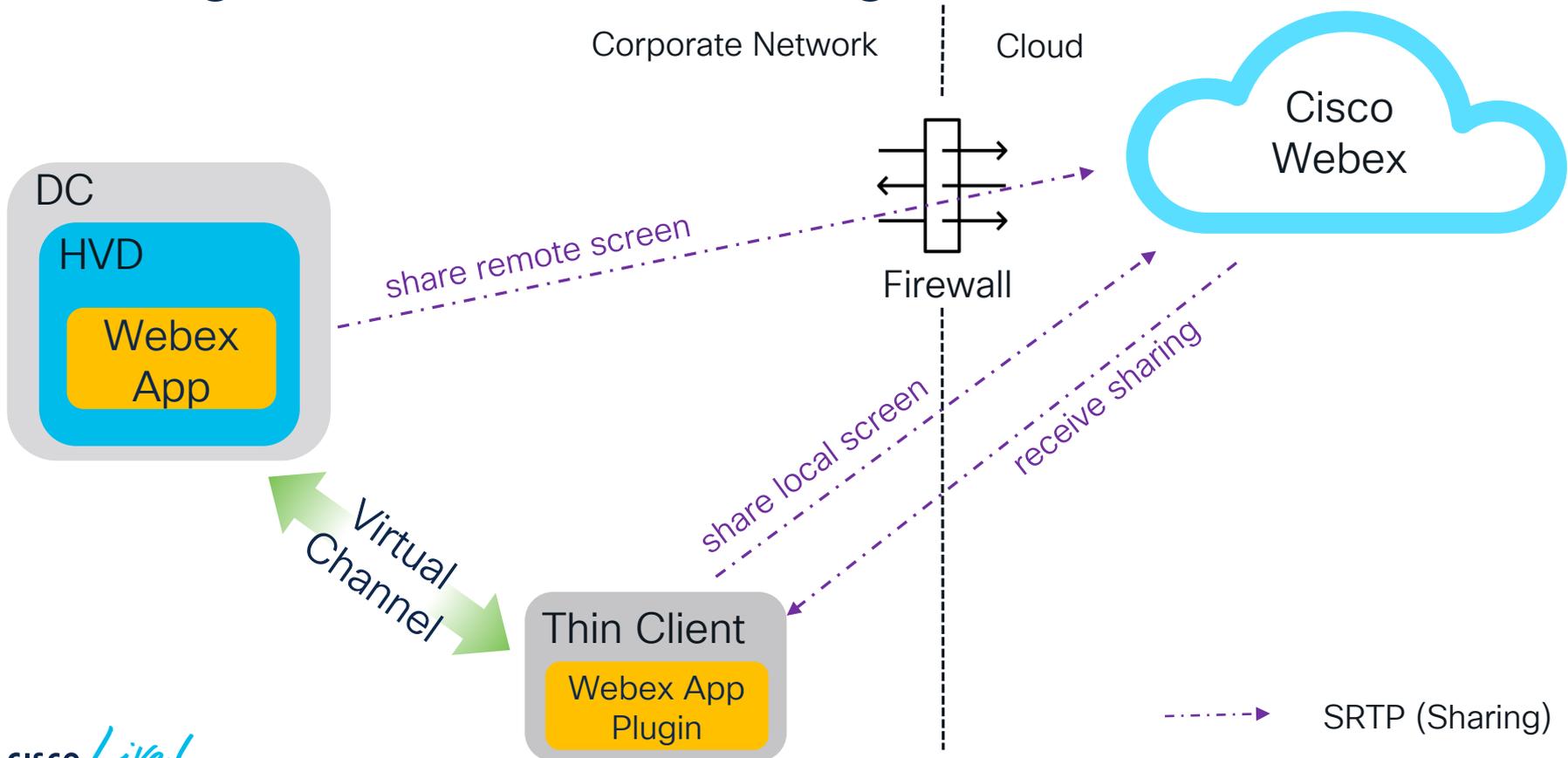
Sharing flow - Call on Webex



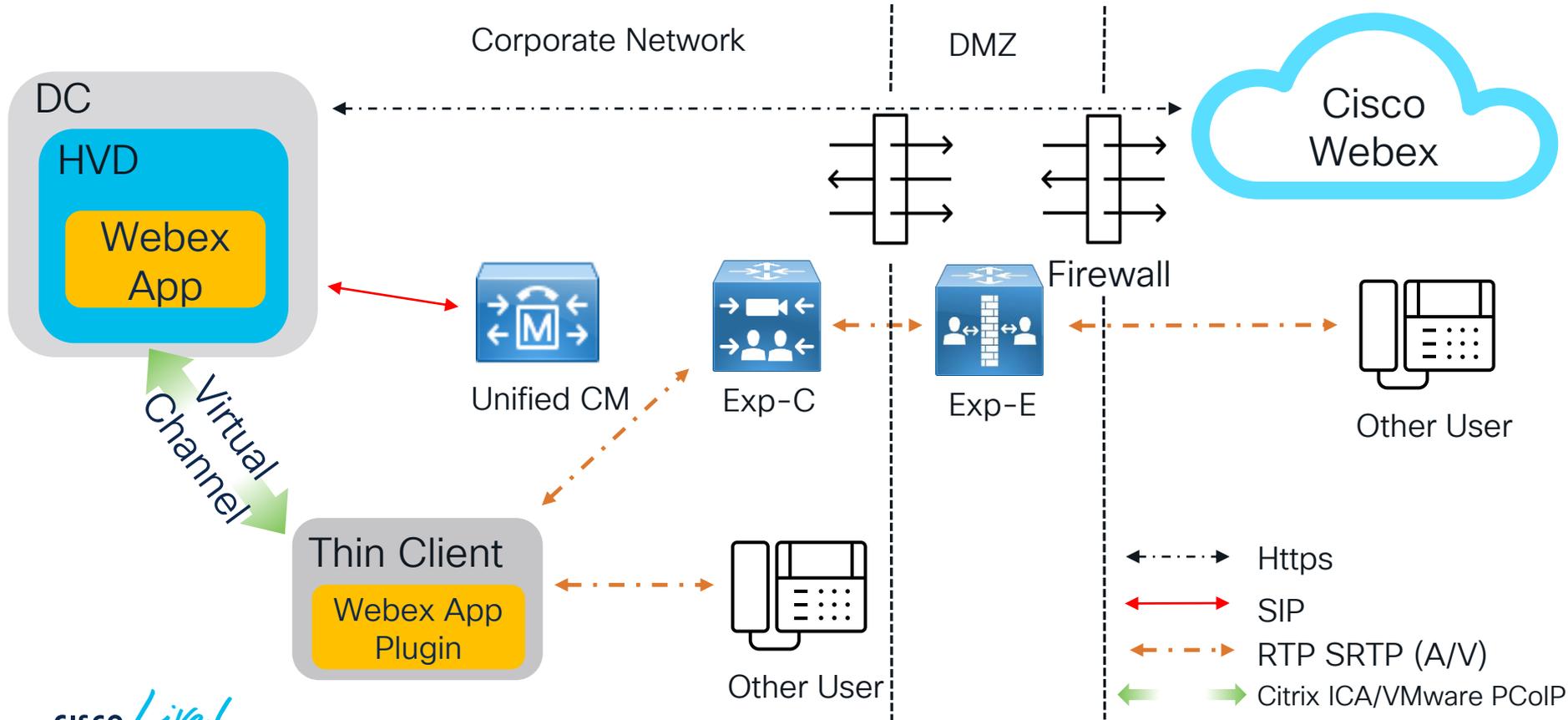
Architecture – Webex Calling



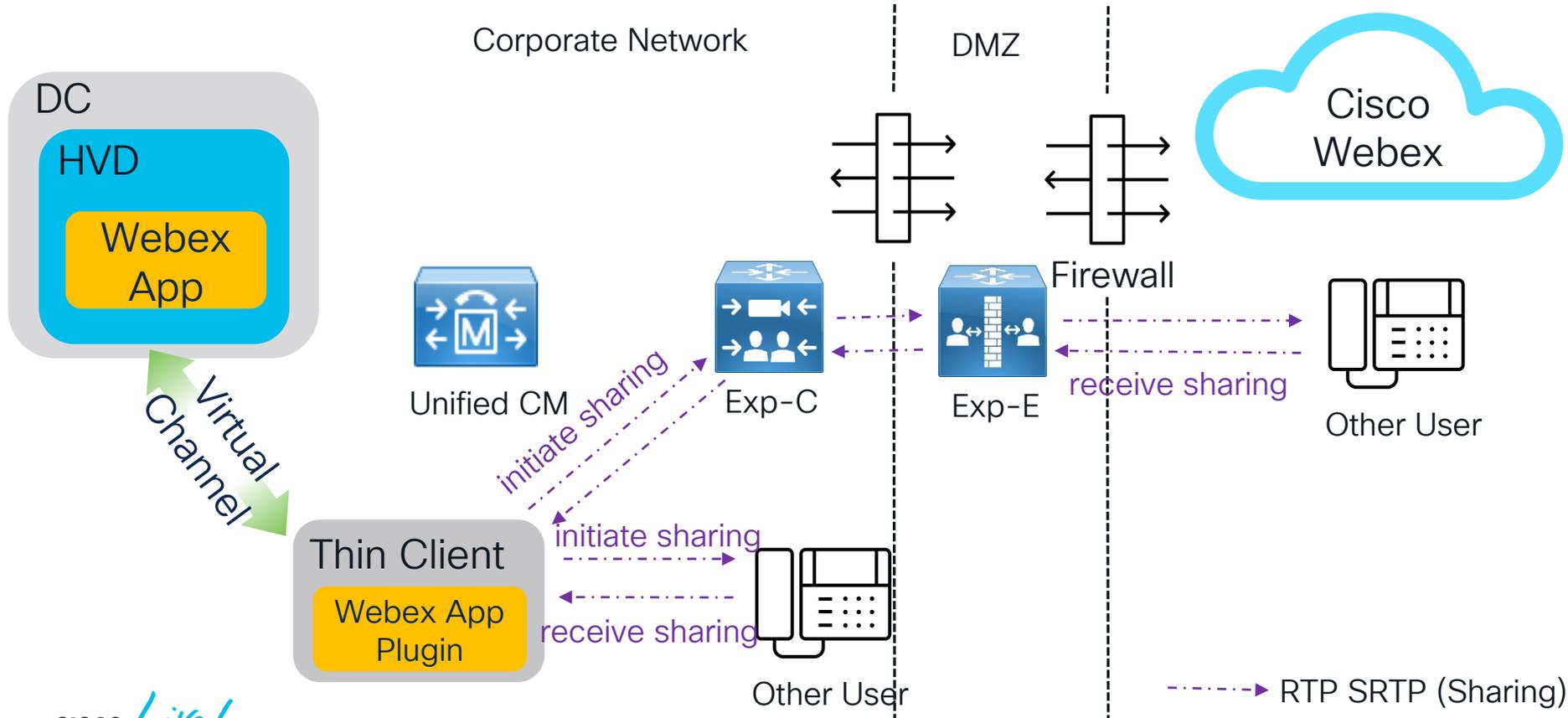
Sharing flow – Webex Calling



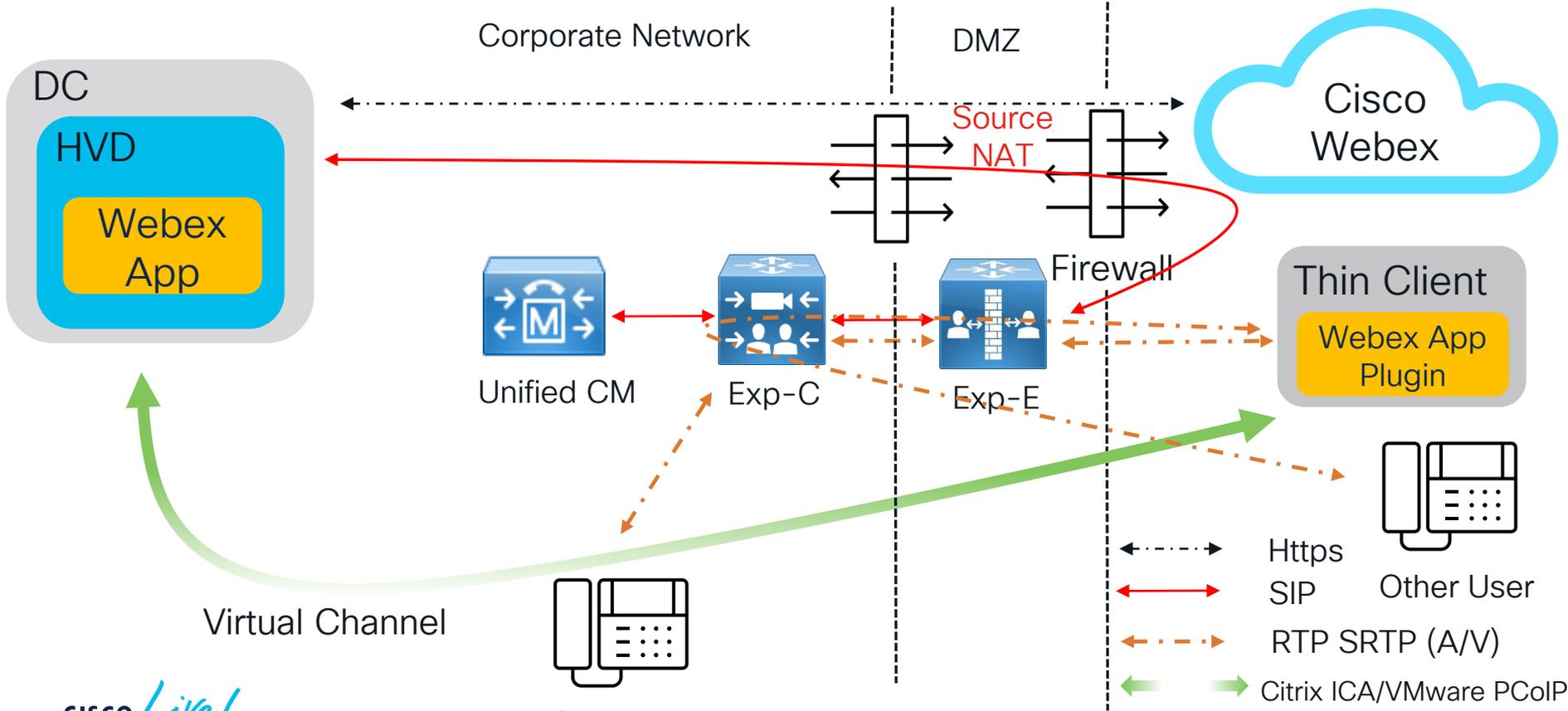
Architecture – Webex with Unified CM



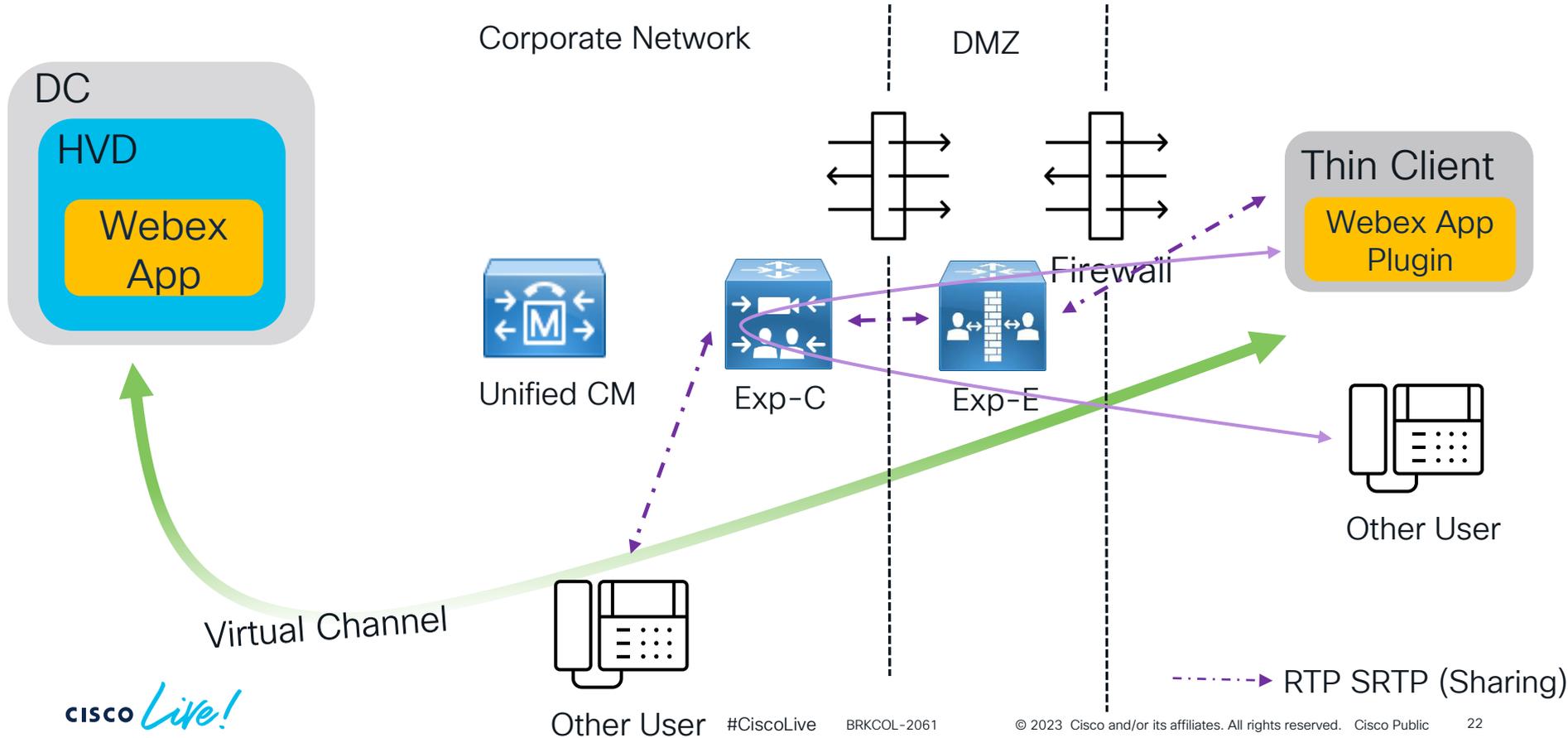
Sharing flow – Webex with Unified CM



Architecture – Webex with Unified CM for MRA



Sharing flow – Webex with Unified CM for MRA



System Requirements

Requirements for Webex app on HVD

Single-session operating system

- Microsoft Windows 10
- Windows 365 Cloud PC

Multi-session operating system

- Microsoft Windows Server 2016
- Microsoft Windows Server 2019
- Microsoft Windows Server 2022

Multi-session cloud virtualization service

- Azure Virtual Desktop (AVD, formerly Windows Virtual Desktop)—provides Windows 7 Enterprise and Windows 10 Enterprise virtualization
- VMware Cloud (installed on AWS)

Requirements for Webex app on HVD

Connection Broker / VDA

- Citrix Virtual Apps and Desktops 7 CR 2212
- Citrix Virtual Apps and Desktops 7 2203 LTSR CU2
- Citrix Virtual Apps and Desktops 7 1912 LTSR CU6
- XenApp and XenDesktop (7.15 LTSR CU9)

(*Virtual channel allow list policy is enabled since Citrix Virtual Apps and Desktops 7 2109. You must add the Webex app virtual channel (CSCOTM) to the allow list with the virtual channel name and process path: "CSCOTM,C:\Program Files\Cisco Spark\dependencies\teamshvdagent.exe")

- VMware Horizon Agent:
 - 7.10 to 7.13 (7.13.0 to 7.13.2)
 - 8 2006 (8.0) to 8 2212
- Remote Desktop App for AVD

Requirements for Webex app thin client on Windows

Supported Software

- Microsoft Windows 10
- Microsoft Windows 11 (for VDI plugin 41.12 and later)

Citrix Workspace app or VMware Horizon client

- Citrix Receiver 4.9 and later
- Citrix Workspace app 1808 and later
- VMware Horizon View Client version 5.x
- VMWare Horizon client version 8.x (2103) is supported from the Webex VDI plugin version 41.4 onward
- VMware Horizon client version 8.x (2106) for Webex VDI plugin version 41.8 onward

Requirements for Webex app thin client on Windows

Supported Hardware

- 2 GB installed RAM
- 128 MB physical memory
- 256 MB disk space
- Minimum CPU Mobile AMD Sempron Processor 3600+, 2-GHz Intel Core 2 CPU, or T7400 2.16 GHz
- DirectX 11-compatible GPU
- USB 2.0 ports for camera and audio devices

*If you want users to use virtual backgrounds, you must meet the [virtual background requirements](#).

Requirements for Webex app VDI – More

Please find more detail requirement info for Linux, MAC from below link:
[Deployment guide for Webex App for Virtual Desktop Infrastructure \(VDI\)](#)



Requirements for Webex Meeting on HVD

Supported Software

- Windows 8 and 10
- Windows Server 2012 and 2016

Connection Broker / VDA

- Citrix Virtual Apps and Desktops 7 1906, 1912, 2012, 2103, 2206
- VMware Horizon 7 version 7.6, 7.7, 7.8, 7.9, 7.10, or 7.11
- VMware Horizon Agent 8 version 2111

**VMware Horizon HTML Access is not supported*

Requirements for Webex Meeting plugin on thin client

Supported Software

- Citrix Workspace App (formerly Citrix Receiver)—any version that supports Citrix Virtual Apps and Desktops 7 1906, 1912, 2012, 2103, 2206.
- VMware Horizon Client for Windows versions 5.0, 5.1, 5.2, 5.3, 5.5, or 2209.

Supported Hardware – Win10

- Processor: AMD Embedded G-Series GX-420GI Radeon R7E 2.00GHz
Cores 2
Memory: 4G
- Processor: 6th Generation Intel Core i5-6500TE processor
Memory: 4G

Requirements for Webex Meeting VDI - More

Please find more detail requirement info for other OS in [Prepare](#) section:
[Administration guide for Webex Meetings Virtual Desktop software](#)



How to deploy Webex VDI

Get Webex file

Find all from:

<https://www.webex.com/downloads/teams-vdi.html>

Webex VDI

The Webex application can be used with Windows or Linux thin-client. The different Webex VDI plugins can be found on this page. For more information, please refer to the [Webex VDI Release Notes](#).

Release Date	Webex App (43.2.0.25211)	Bundled Webex App (43.2.0.25273)	Webex App VDI Plugin (43.2.0.25211)	Bundled VDI Plugin (43.2.0.25211)
02/14/2023	Windows 32-bit Windows 64-bit	Localized Windows 64-bit (with MC: 43.2.4.9) Non-Localized Windows 64-bit (with MC: 43.2.4.9)	Windows 32-bit	Windows 32-bit (with MC VDI plugin: 43.2.0.179) Windows 64-bit (with MC VDI plugin: 43.2.0.179) MacOS Installer (with MC VDI plugin: 43.2.0.90)
			Windows 64-bit	
			Ubuntu 64-bit	
			eLux RP6 64-bit	
			HP ThinPro 64-bit	
			MacOS Installer	
			iGelOS: Will be available on IGEL website	
			Dell ThinOS: Will be available on DellOS website	
			Stratodesk NoTouchOS: View Stratodesk documentation for details	

Plugin Compatibility – Webex App

- [Standalone Webex app](#) – release every month.
- [Webex app/Bundled for VDI on HVD](#) – release every 2 month. Odd month do not have the feature release for standalone version. Even month release catch up the features.
- [Webex app plugin/Bundled for VDI on thin client](#) – release every 2 month.
- [Webex App VDI supports backward compatibility](#) – the latest Webex App VDI release supports the latest Webex App VDI plugin as well as three previous plugin releases (N-3).
For more details, please refer to ‘Version Support’ in [Webex App | VDI release notes](#).
- Recommend user install latest version for both.

** When a release of Webex App is working with an earlier VDI plugin, the solution is running in backward compatibility mode. In this mode, Webex App for VDI supports all messaging features but only basic calling features. Check [Features in backward compatibility mode](#) for more.*

Plugin Compatibility – Webex Meeting

- [Standalone Webex Meeting](#) – Release every month.
- [Webex Meeting on HVD](#) – Release every month. Release quarterly for slow channel.
- [Webex Meeting plugin on thin client](#) – Release quarterly from version 42.7. No auto upgrade.
- [Webex Meeting VDI supports backward compatibility](#) – the latest Webex VDI release supports the latest Webex VDI plugin as well as seven previous plugin releases (N-7).

For more details, please refer to [Compatibility List](#).

- If you are using a lower version of the plugin, but a higher version of the HVD, you will still get the feature list that is corresponding to the lower version of meeting client.

Deploy Webex App on HVD - Environment

- **Persistent mode** – In a persistent environment, a user's local operating system changes are preserved after a user signs out.
- **Non-persistent mode** – In a non-persistent environment, a user' local operating system changes are not preserved after a user signs out. The applicable user-specific information (user data, profile, and settings) is cached during the user session.
- All user preferences are in the roaming database: spark_roaming_store.db.
- To keep Webex credentials and preferences consistently between VDI sessions(sign out and sign in), should always back up and restore spark_roaming_store.db.

Deploy Webex App on HVD – Install command

- Installation with Auto-upgrade enabled
 - `msiexec /i c:\users\[username]\Downloads\Webex.msi ALLUSERS=1 ENABLEVDI=2 AUTOUPGRADEENABLED=1`
 - `msiexec /i c:\users\[username]\Downloads\Webex.msi ALLUSERS=1 ENABLEVDI=2 AUTOUPGRADEENABLED=1 ROAMINGENABLED=1`
- Installation with Auto-upgrade disabled
 - `msiexec /i c:\users\[username]\Downloads\Webex.msi ALLUSERS=1 ENABLEVDI=2 AUTOUPGRADEENABLED=0`
 - `msiexec /i c:\users\[username]\Downloads\Webex.msi ALLUSERS=1 ENABLEVDI=2 AUTOUPGRADEENABLED=0 ROAMINGENABLED=1`

*ROAMINGENABLED=1 for a non-persistent VDI environment.

Deploy Webex App on HVD – Arguments

Argument: **ALLUSERS=1**

- Per-machine installation.
- Installs Webex App in c:\program files, is recommended for VDI environment.
- Requires admin install privilege.
- If this argument is not specific, Webex app will do a per-user installation. Installs Webex app in %LocalAppData%\Programs\Cisco Spark as default.

Argument: **ENABLEVDI=1**

- Enable the VDI optimized mode and will work with thin client plugin installed.
- Set to 0: Disable VDI optimized mode.
- Set to 2: Webex app will detect the environment automatically. If there's thin client plugin installed, will use the VDI optimized mode.
- Requires admin install privilege.

Deploy Webex App on HVD – Arguments

Argument: [AUTOUPGRADEENABLED=0](#)

- Set to 0: Webex app will not do version upgrade on HVD. Admin/User needs to manually update.
- Set to 1: Allow Webex app version upgrade automatically on HVD. If need auto upgrade, recommend use slow channel version which update every 4 months.
- Requires admin install privilege.
- This argument must be accompanied by [ALLUSERS=1](#), otherwise the AUTOUPGRADEENABLED argument is ignored.

Deploy Webex App on HVD – Arguments

Argument: **ROAMINGENABLED=1**

- If this argument is specified, then the roaming database (spark_roaming_store.db) is stored in the user's roaming directory (AppData\Roaming). Otherwise, the roaming database is stored in AppData\Local.
- Suits for non-persistent VDI environment. User can quickly back up and restore the folder Appdata\Roaming\CiscoSpark so that VDI users won't lose preferences between sessions.
- Requires admin install privilege.
- This argument must be accompanied by **ALLUSERS=1**, otherwise the ROAMINGENABLED argument is ignored.

Deploy Webex App on HVD – Arguments

Argument: `FORCELOCKDOWN=LockWhenCompatible`

- Only for the bundled installer.
- When installing the bundled components for Webex app, you can use this argument to lock the version of the app that is used to join meetings, if the version is compatible with the site version.
- If the version is not compatible with the site version, then the app which is used to join meetings will do auto upgrade.
- Set to `FORCELOCKDOWN= NeverUpdate`: the app which is used to join meetings will never do any auto upgrade even if it's not compatible with site version. In this situation, user may have problem when join meeting.
- Requires admin install privilege

Deploy Webex App on HVD – Arguments

Regarding VDI deploy arguments and for other OS, please find details from:

[Deployment guide for Webex App for Virtual Desktop Infrastructure \(VDI\)](#)

For more arguments, like `ACCEPT_EULA`, `AUTOSTART_WITH_WINDOWS`, `DEFAULT_THEME`, etc... please find details from:

[Webex App | Installation and automatic upgrade](#)

Deploy Webex App plugin on thin client

- Make sure Citrix or VMware has been installed on thin client first.
- Double click the plugin msi file and proceed the install process.
- Could enable or disable plugin auto upgrade by adding registry key on HVD:

HKEY_LOCAL_MACHINE\SOFTWARE\Cisco Spark Native

[AutoUpgradeVDIPluginEnabled=0](#) - not upgrade

[AutoUpgradeVDIPluginEnabled=1](#) - auto upgrade

- Auto upgrade bi-monthly
- Available after version 42.2
- Only for Windows and MAC OS.
- The plugin can only upgrade automatically if the Webex App on the virtual desktop also upgrades automatically.

Deploy Webex App VDI – Control Hub

- Enable the VDI optimization for all org users in Control Hub.
- Same as argument `ENABLEVDI=1`.

VDI for Webex app

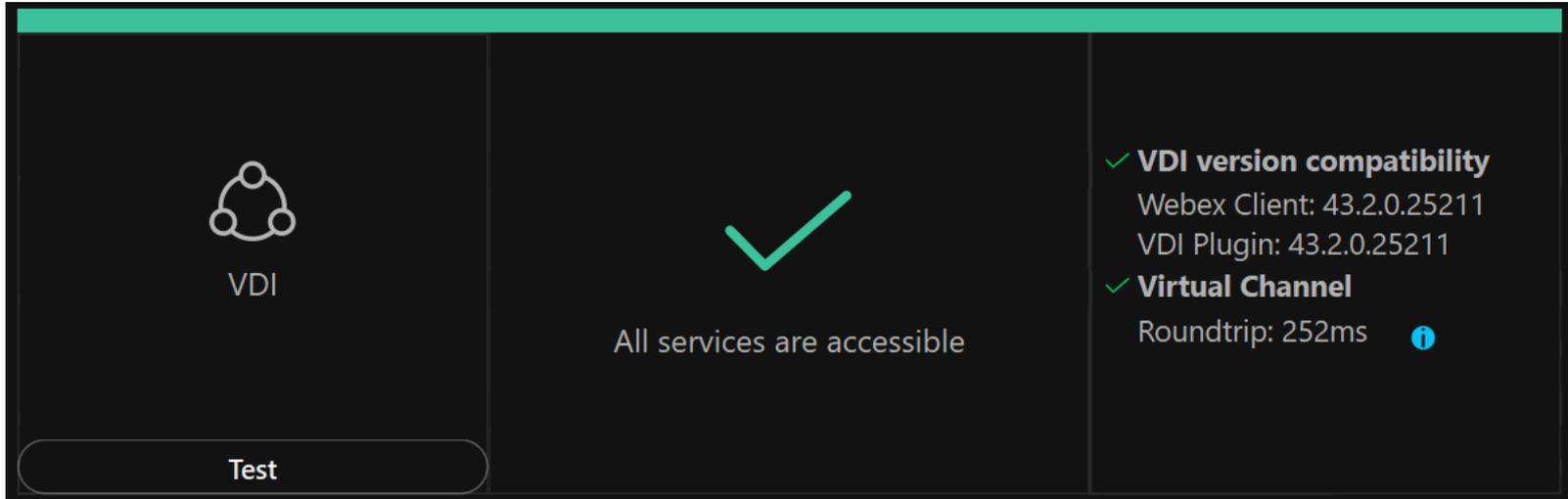
Enable VDI Optimization for Webex app

If you enable VDI for Webex app, users can use the built-in messaging, meetings, and calling functionality on their thin client through VDI infrastructure. The VDI solution optimizes media streams: audio and video streams directly between the thin clients without going through the Hosted Virtual Desktop (HVD). [Learn More](#)



Confirm Webex App VDI works

Check VDI connection via Help -> Health Checker menu



The screenshot shows the VDI status page in the Webex Health Checker. It features a dark background with a teal header bar. On the left, there is a VDI icon (three circles connected by lines) and the text 'VDI'. Below it is a 'Test' button. In the center, a large teal checkmark is displayed above the text 'All services are accessible'. On the right, there are two status items: '✓ VDI version compatibility' with sub-items 'Webex Client: 43.2.0.25211' and 'VDI Plugin: 43.2.0.25211', and '✓ Virtual Channel' with 'Roundtrip: 252ms' and an information icon.

Item	Status	Details
VDI version compatibility	✓	Webex Client: 43.2.0.25211 VDI Plugin: 43.2.0.25211
Virtual Channel	✓	Roundtrip: 252ms

Deploy Webex Meeting on HVD - Registry

- Download the Webex Meeting app msi file from your own Webex site, 'Download' page and install it on HVD.

<https://sitename.webex.com/webappng/sites/sitename/dashboard/download>

- Could modify registry to control VDI enable or disable on HVD

Keys:

- For 32-bit versions:
Computer\HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Webex\NativeVDI
- For 64-bit versions:
Computer\HKEY_LOCAL_MACHINE\SOFTWARE\Webex\NativeVDI

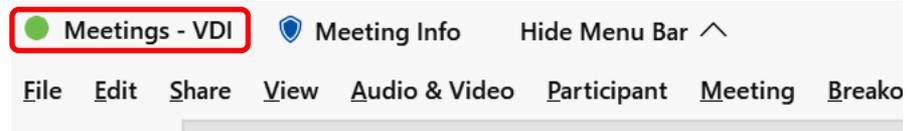
Name	Type	Data
VDIFeatureEnabled	REG_DWORD	1 - Enabled 0 - Disabled <i>Others</i> - Ignore

Deploy Webex Meeting plugin on thin client

- Make sure Citrix or VMware has been installed on thin client.
- Download Meeting plugin from your own Webex site -> Download page.
- Double click the plugin msi file and proceed the install process.
- Plugin on thin client released quarterly from version 42.7. It's aligned with Meeting slow channel release.
- No auto upgrade for Meeting plugin. Need manual delete and install for a newer version.

Confirm Webex Meeting VDI works

'VDI' should appear in the UI once launch a meeting.



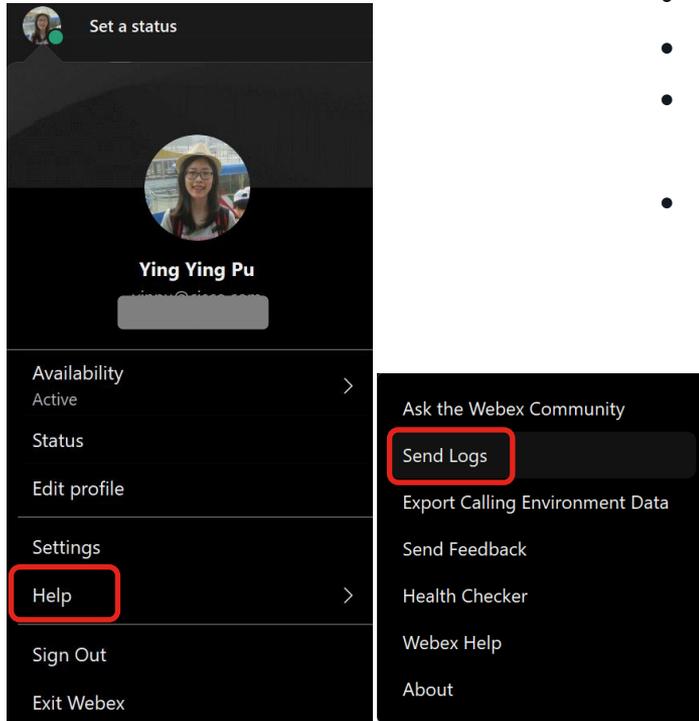
For more deploy methods on other OS and steps, please refer to:
[Administration guide for Webex Meetings Virtual Desktop software](#)

Coming Soon - Video Mesh-ready Meeting Platform

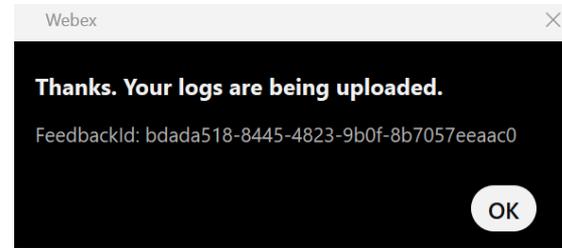
Meetings functionality will be built into the single Webex App VDI plugin.

Common Issue and Troubleshooting

How to get logs for Webex app



- Click Avatar -> Settings -> Send logs
- Copy the FeedbackId and provide it to TAC
- Control Hub admin could get the log from:
Control Hub -> Troubleshooting
- Get the log from local pc:
HVD - %userappdata%\Local\CiscoSpark
Thin client - %userappdata%\Local\CiscoWebexVDI



How to get logs for Webex app

The screenshot shows a Windows File Explorer window with the following structure:

- Address bar: > a56cb89e-fb1e-4adb-8aa6-1281ee4c4775_FB > media
- Left sidebar: a56cb89e-fb1e-4adb-8aa6-1281ee4c4775_FB
 - callLogs
 - logArchive
 - media (selected)
 - meetings
 - ulogin
 - current_log
 - last_run_current_log
 - spark-windows-host-log
 - spark-windows-host-log-ProcessCleaner.dll
 - spark-windows-host-log-SparkPrtDll.dll
 - spark-windows-host-log-spark-windows-app-i...
 - spark-windows-host-log-spark-windows-media...
 - spark-windows-loader-log
- Main pane: Table of files in the 'media' folder.

Name	Date modified	Type
CiscoWebexVDI.7z	3/19/2023 4:34 PM	7Z File
current_log	3/19/2023 4:34 PM	Text Document
HVDAgentLog.7z	3/19/2023 4:34 PM	7Z File
TCVirtualChannel.7z	3/19/2023 4:34 PM	7Z File

Red arrows and labels identify the files:

- CiscoWebexVDI.7z → Thin client log
- current_log → HVD client log
- HVDAgentLog.7z → HVD virtual channel log
- TCVirtualChannel.7z → Thin client virtual channel log

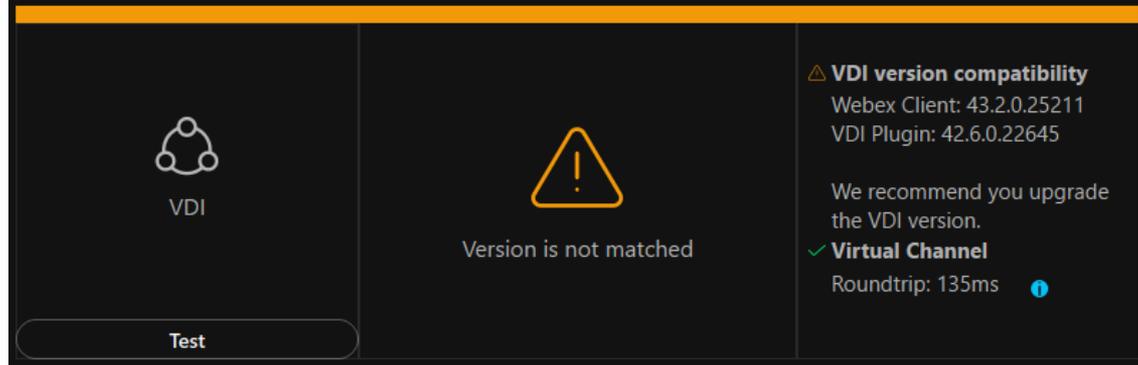
Basic info gathering

- System details – OS version of HVD and thin client; Citrix or VMware app name, version on HVD and thin client; Webex app and plugin version.
- How was Webex app installed on HVD. What arguments were used.
- VDI connection status correct or not.
- First time use or broke recently.
- Persistent or non-persistent environment.
- Webex app version with plugin version is compatible or not.
- Used as VDI optimized mode or not.

Plugin compatibility check – Webex App

Webex App VDI support backward compatibility. To use the latest features, make sure app and plugin are both upgraded to the latest.

User could check version info from VDI status, Help ->Health Checker.



Plugin compatibility check – Webex App

- Search “[printVersions](#)” as keyword in current_log.txt of HVD or thin client.

From HVD current log:

```
2023-03-19T08:20:36.020Z <Debug> [0x1a00] HealthCheckManager.cpp:465 printVersions:  
HVDClient:43.2.0.25211 ThinClient:43.2.0.25211 TCSDK:1.0.676.0 HVDSdk:1.0.676.0  
TCPlugin:1.0.676.0 HVDAgent:1.0.676.0 Citrix:23.2.0.9 VMWare: MyInternal:1 PeerInternal:1
```

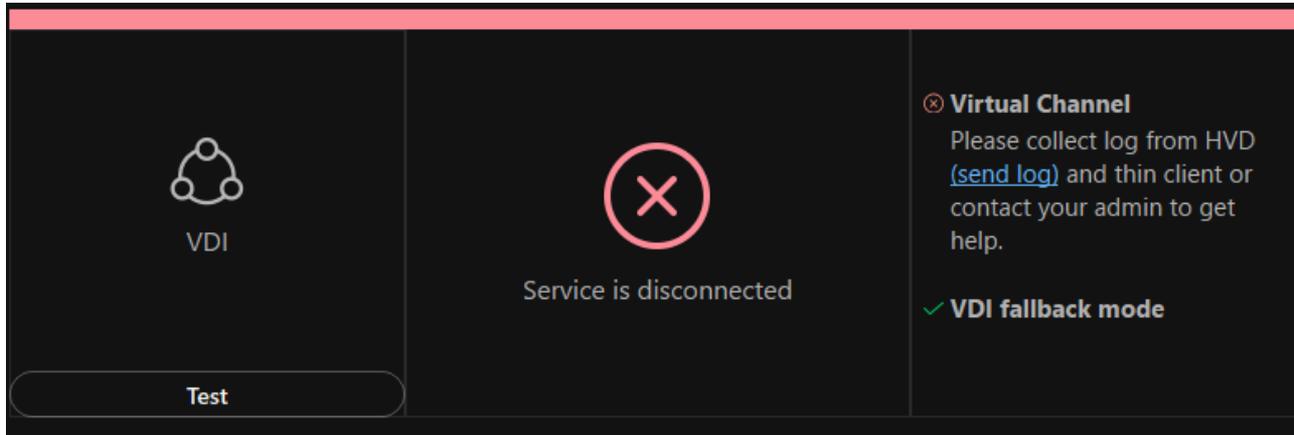
- Search “[Compatibility](#)” as keyword in current_log.txt of HVD to see if it’s compatible or not:

```
2023-03-19T08:27:25.373Z <Debug> [0x1a00] VDIDiagnosticDataManager.cpp:217  
VDIDiagnosticDataManager::OnVirtualChannelStatusChanged:Connection Status:Connected Virtual  
Environment:Citrix Plugin version:43.2.0.25211 Version Compatibility:Compatible Thin client  
OS:Windows
```

**Check compatibility list from [Version Support](#) tab.*

Common Issue - Virtual Channel Disconnected

Virtual Channel disconnection caused VDI turns to fallback mode. Fallback mode supports standard calls and call recording. The full feature set isn't supported. Call quality is lower because of the server or network issues that cause the switch to fallback mode.



Common Issue - Virtual Channel Disconnected

From current_log.txt on HVD side, could see Virtual Channel status changed to Disconnected:

- 2023-03-21T06:02:53.303Z <Debug> [0x348] VDIDiagnosticDataManager.cpp:217
VDIDiagnosticDataManager::OnVirtualChannelStatusChanged:Connection Status:Disconnected
Virtual Environment:- Plugin version:- Version Compatibility:- Thin client OS:-
- 2023-03-21T06:02:53.303Z <Error> [0x348] MediaEngineVDIProxy.cpp:1072
MediaEngineVDIProxy::OnVirtualChannelStatusChanged:OnVirtualChannelStatusChanged -
connected = false.
- 2023-03-21T06:02:53.303Z <Debug> [0x348] MediaManager.cpp:4631
MediaManager::onVDIVirtualChannelDisconnected:VDI virtual channel disconnected
- 2023-03-21T06:02:53.303Z <Debug> [0x348] EccMediaConnectionManager.cpp:1621
EccMediaConnectionManager::onVDIVirtualChannelDisconnected:VDI virtual channel
disconnected

Common Issue - Virtual Channel Disconnected

1. In-Compatible version of Webex plugin on Thin client

- VDINotificationManager.cpp:177 VDINotificationManager::checkPluginVersion: notify - plugin not compatible
VDIDiagnosticDataManager.cpp:217
VDIDiagnosticDataManager::OnVirtualChannelStatusChanged: Connection Status: Connected
Virtual Environment: Citrix Plugin version: 42.10.0.23293 Version Compatibility: In-Compatible
Thin client OS:

Solution:

- Make sure the Webex app version on HVD and the Webex app plugin version on thin client is compatible. Follow details in [Version Support](#) section.

Common Issue - Virtual Channel Disconnected

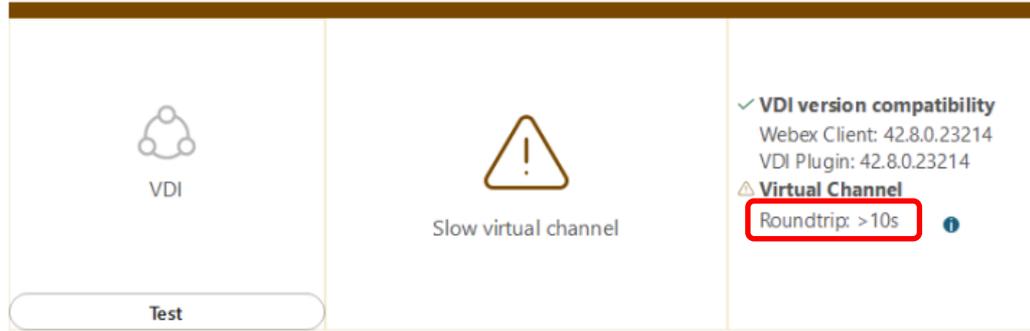
2. Webex Plugin on thin client not installed or not detected. From current_log.txt on HVD side:

- 2023-03-21T01:59:04.304Z <Debug> [0x211c] VDINotificationManager.cpp:157 VDINotificationManager::checkPluginInstalled::<lambda_08e5698297649157b2ea1ce02745b7dd>::operator ():checkPluginInstalled timer **plugin not installed**
- 2023-03-21T06:02:53.301Z <Debug> [0x348] VdiManager.cpp:576 VdiManager::toggleFallbackMode:Toggle Fallback mode to: On, Reason: **VirtualChannelNotAvailable**, Current status: InVDIMode

Solution:

- Make sure plugin is installed on thin client.
- Install the Webex plugin **after** Citrix or VMware installed. Follow the correct installation order.
- Upgrade Webex app/plugin version.

Common Issue - Virtual Channel Disconnected



VDI

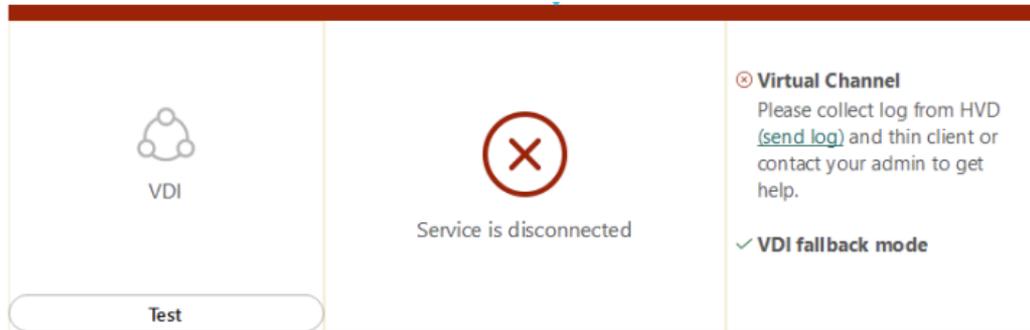
Slow virtual channel

✓ **VDI version compatibility**
Webex Client: 42.8.0.23214
VDI Plugin: 42.8.0.23214

⚠ **Virtual Channel**
Roundtrip: >10s ⓘ

Test

Once the RTT > 60s



VDI

Service is disconnected

⊗ **Virtual Channel**
Please collect log from HVD ([send log](#)) and thin client or contact your admin to get help.

✓ **VDI fallback mode**

Test

Common Issue - Virtual Channel Disconnected

3. RTT timeout between HVD and Thin client

```
VDIDiagnosticDataManager.cpp:46 VDIDiagnosticDataManager::init::::operator ():Update  
roundtrip time. HealthMonitor.cpp:112 PingAndWaitInSecond:enter PingAndWaitInSecond  
HealthMonitor.cpp:152 sendPingRequestAndWait:sendPingMessageToPeer38  
VDIDiagnosticDataManager.cpp:46 VDIDiagnosticDataManager::init::::operator ():Update  
roundtrip time. VDIDiagnosticDataManager.cpp:55  
VDIDiagnosticDataManager::init::::operator ():Can't ping because last ping not finished.  
HealthMonitor.cpp:170 sendPingRequestAndWait:WaitFor ping result timeout  
HealthMonitor.cpp:123 PingAndWaitInSecond:leave PingAndWaitInSecond  
HealthMonitor.cpp:131 PingAndWaitInSecond:PingAndWaitInSecond: -1
```

continue in next slide...

Common Issue - Virtual Channel Disconnected

3. RTT timeout between HVD and Thin client

```
KeepAliveHandler.cpp:145 notifyHeartBeatReceived:notifyHeartBeatReceived  
KeepAliveHandler.cpp:124 onTimer:Peer Connection dead detected! No response for: 69.9707  
seconds HealthCheckManager.cpp:125 onConnectionLostDetected:onConnectionDeadDetected  
VirtualChannelManagerImpl.cpp:212  
OnVirtualChannelStatusChanged:OnVirtualChannelStatusChanged: 0  
VDIVirtualChannelManager.cpp:242  
VDIVirtualChannelManager::OnVirtualChannelStatusChanged:Receive VirtualChannelStatus:0  
VdiManager.cpp:408 VdiManager::OnVirtualChannelStatusChanged:fallback-  
OnVirtualChannelStatusChanged status: 0 VdiManager.cpp:419  
VdiManager::OnVirtualChannelStatusChanged:fallback-switchFallback: 0 VdiManager.cpp:544  
VdiManager::toggleFallbackMode:Toggle Fallback mode to: On, Reason:  
VirtualChannelNotAvailable, Current status: InVDIMode CoreFramework.cpp:802  
CoreFramework::onApplicationEventHappened:ReadyToFallbackMode, start..
```

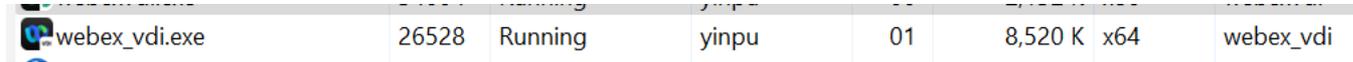
Common Issue - Virtual Channel Disconnected

3. RTT timeout between HVD and Thin client

- Bad network condition between HVD and Thin client
- Webex app plugin not work

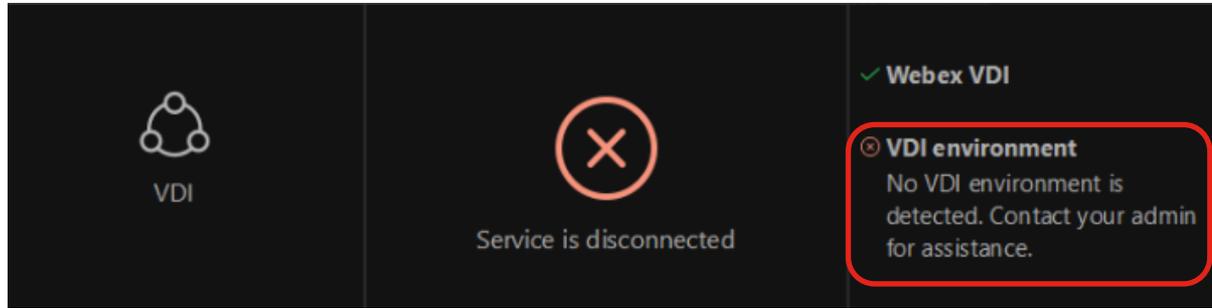
Solution:

- Check the network connectivity
- Check Webex app plugin process in task manager. Manually end it and restart.



webex_vdi.exe	26528	Running	yinpu	01	8,520 K	x64	webex_vdi
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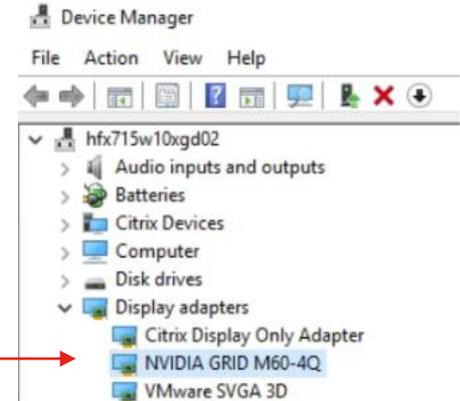
Common Issue – No VDI environment is detected



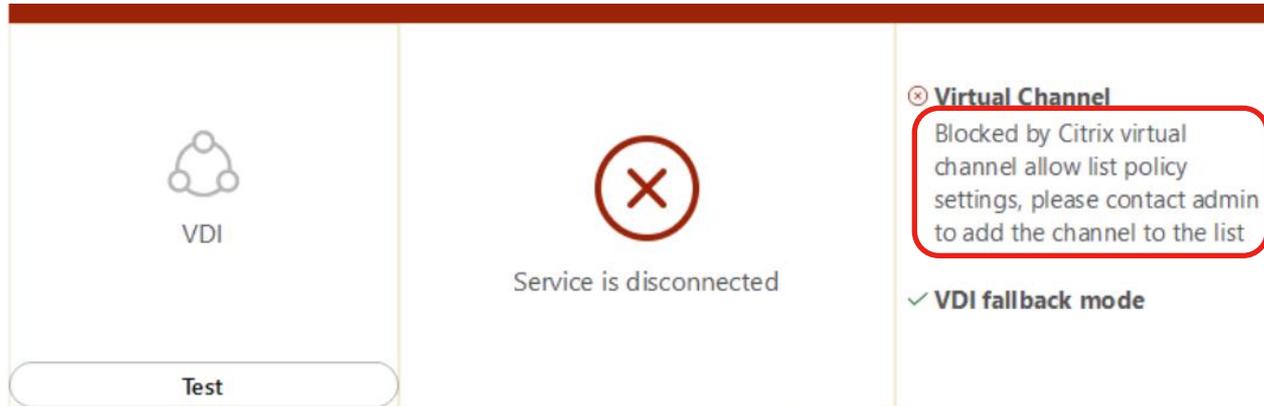
- Specific display adapter. eg: NVIDIA vGPU
- Specific Citrix or VMware release on HVD/Thin client.

Solution:

- Try use “ENABLEVDI=1” argument when install on HVD.
- Make sure use the supported version of Webex app or plugin which support the specific Citrix/Vmware version.



Common Issue – Virtual Channel Allow List



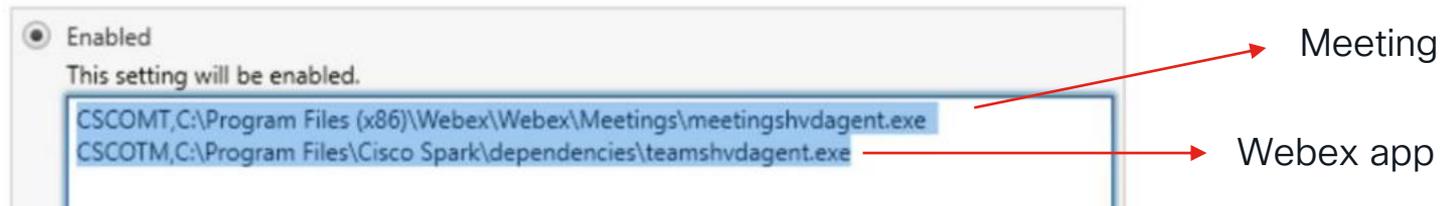
**This info will appear if Webex app version is equal or higher than 42.8*

From Citrix Virtual Apps and Desktops 7 2109, "virtual channel allow list policy" is enabled by default. You must configure this policy for Webex App VDI first (add Cisco Virtual Channel) for optimized mode to function properly or disable this policy.

Common Issue – Virtual Channel Allow List

- When it's enabled, only Citrix virtual channel is allowed.
- When it's disabled, all virtual channels are allowed.
- Add the Webex app virtual channel (CSCOTM) to the allow list with the virtual channel name and process path: "CSCOTM,C:\Program Files\Cisco Spark\dependencies\teamshvdagent.exe"

Virtual channel allow list



Common Issue – MRA is not deployed accordingly

The screenshot displays a user interface with three main sections. On the left, there is a 'VDI' section with a cloud icon and a 'Test' button below it. The middle section is for 'Mobile and Remote Access', featuring a red 'X' icon. On the right, a red-bordered box contains a warning message: 'Mobile and Remote Access' with a triangle icon, followed by the text 'We detected that your Mobile and Remote Access is not deployed. Contact your admin for assistance.' Below this box, a green checkmark icon is next to the text 'VDI fallback mode'.

Common Issue – MRA is not deployed accordingly

Log sample:

```
MediaEngineVDIProxy.cpp:472 MediaEngineVDIProxy::getServiceRecordsImp:::operator ():get  
DNS srv service records from TC, internals = , externals = EccManager.cpp:6407  
EccManager::getServiceRecords:::operator ():No SRV record from client side, thin client should be  
off-prem and no express way, so fallback to native teams VdiManager.cpp:544  
VdiManager::toggleFallbackMode:Toggle Fallback mode to: On, Reason: UCServiceNotAvailable,  
Current status: InVDIMode
```

Solution:

Please check all requirements in ‘Mobile and Remote Access (MRA) requirements’ section in [Deployment guide for Webex App for Virtual Desktop Infrastructure \(VDI\)](#)

Non-persistent environment login issue

Auto login not work on Webex app on non-persistent environment.

Log sample:

```
<Error> [6244] EncryptionKeyStorageUtilsWin.cpp:124 encryption::decrypt:Failed to decrypt using platform, error: 2148073483
<Error> [6244] EncryptionKeyStorageUtilsWin.cpp:151 encryption::decryptAndDecodeKey:Cannot decrypt database key.
<Warn> [6244] DatabaseLifecycle.cpp:2489 DatabaseLifecycle::checkRoamingDatabase:Unable to read key for database, dropping user DB entirely and creating a new one.
<Info> [6244] DatabaseLifecycle.cpp:4406 DatabaseLifecycle::removeDatabaseFromDisk:Dropping database...
```

The roaming database(spark_roaming_store.db) contains all user credentials and preferences, encrypted using AES256.

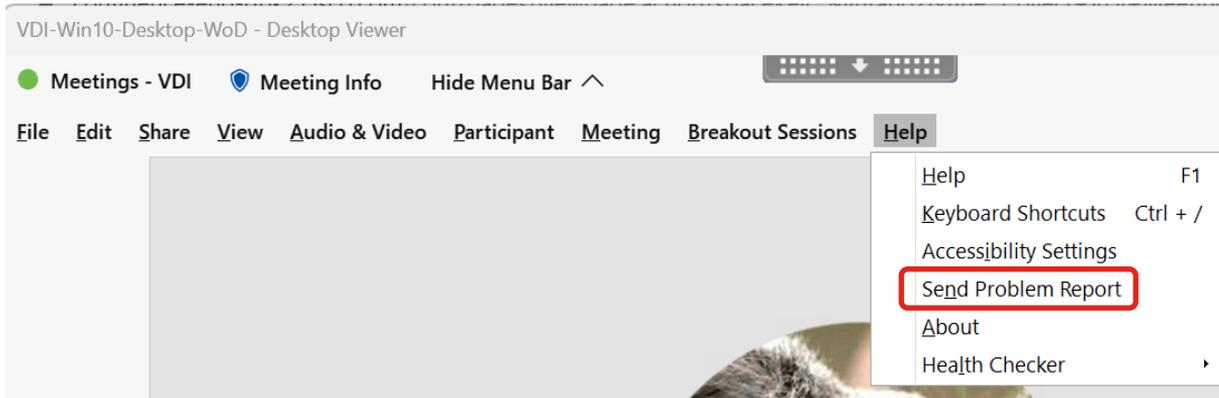
Non-persistent environment login issue

Solution:

- `msiexec /i c:\users\[username]\Downloads\Webex.msi ALLUSERS=1
ENABLEVDI=2 AUTOUPGRADEENABLED=1 ROAMINGENABLED=1`
- To decrypt roaming db, make sure below folders are also synchronized among VDI sessions:
 - AppData\Roaming\Microsoft\Credentials
 - AppData\Roaming\Microsoft\Crypto
 - AppData\Roaming\Microsoft\Protect
 - AppData\Roaming\Microsoft\SystemCertificates

How to get logs for Webex Meeting

On HVD – send problem report and give the tracking ID to TAC

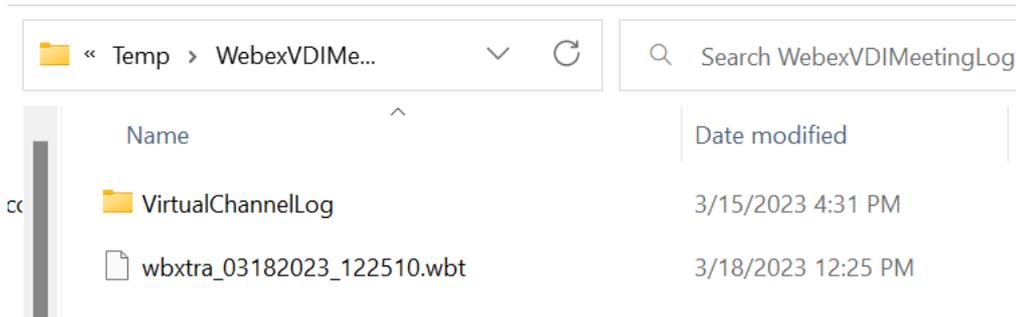


This method should combine HVD and thin client logs.

Also could get the Webex meeting log on HVD side from below folder:
C:\Users\{username}\AppData\Local\Temp\webexmta

How to get logs for Webex Meeting

On Thin client - could find the log from
C:\Users\{username}\AppData\Local\Temp\WebexVDIMeetingLogs



How to get logs for Webex Meeting

Share View

Local > Temp > webexmta > 160937188300693643_62822_20200512_155917

Name	Date modified	Type	Size
160937188300693643_62822_20200512_...	5/12/2020 4:00 PM	Compressed (zipp...	140,887 KB
CiscoMeetings	5/12/2020 4:00 PM	Data Base File	96 KB
TCVirtualChannel_05122020_155915.7z	5/12/2020 4:00 PM	7Z File	399 KB
VirtualChannel	5/12/2020 4:00 PM	Text Document	863 KB
VirtualChannel1	5/12/2020 4:00 PM	Text Document	10,240 KB
wbxmta_basicinfo_20200512_155917	5/12/2020 4:00 PM	XML Document	365 KB
wbxmta_dump_20200512_155917.dmp	5/12/2020 4:00 PM	DMP File	265 KB
wbxmta_screen_20200512_155917	5/12/2020 4:00 PM	JPG File	236 KB
wbxmta_topic	5/12/2020 4:00 PM	Text Document	1 KB
wbxtra_05082020_061848.wbt	5/12/2020 4:00 PM	WBT File	102,400 KB
wbxtra_RESIDENT_05092020_142110	5/12/2020 4:00 PM	Compressed (zipp...	3,247 KB
wbxtra_RESIDENT_05112020_095545	5/12/2020 4:00 PM	Compressed (zipp...	1 KB
webex	5/12/2020 4:00 PM	Configuration setti...	205 KB
WebexVDIMeetingLogs_05122020_15591...	5/12/2020 4:00 PM	7Z File	7,231 KB

1. ThinClient Virtual channel log

2. HVD virtual channel log

3. HVD meeting trace

4. ThinClient meeting trace

*If thin client log is not included in problem report, then get the log from C:\Users\{user name}\AppData\Local\Temp\WebexVDIMeetingLogs on HVD side.

Info from Webex meeting trace log on HVD

- Search by keyword '*VDIService*', could see below info:

mse::enableFeatureToggle, featureToggle=vdiService, enable=TRUE

mse::VDIService::initialize4HVDClient, Is VDI Environment:, isVDIEnv=TRUE

mse::VDIService::initialize4HVDClient, Is Virtual Channel Connected:,
isVChannelConnected=TRUE

mse::VDIService::isCompatibleVDIClient, VDI Thin Client is compatible with VDI HVD Client.

mse::VDIService::initialize4HVDClient, Working on VDI mode!

- Search by keyword '*VDI meeting*', could see meeting VDI status:

CPfwServiceMgr::SendTelemetryActionTracking4VDI, This meeting is a CrossLaunch VDI meeting, mse::VDIThinClientOSType::Windows, Citrix, 4036

Info from Webex meeting trace log on HVD

If see below highlighted logs, then there should be issue:

```
mse::VDIServiceHVDAdapter::detectVirtualChannelConnectionStatus, vdi, Try detect thinClient  
plugin Timeout!, detectPluginTimeout=5  
mse::VDIService::initialize4HVDClient, Is Virtual Channel Connected:,  
isVChannelConnected=FALSE  
mse::VDIService::initialize4HVDClient, Virtual Channel connect failed, start normal Webex  
meeting!
```

Need to check plugin status on thin client and the network connectivity between HVD and thin client.

Meeting not VDI optimized due to...

- Meeting plugin is not installed or not running on thin client

Solution: Check if meeting plugin is installed.

 Cisco Webex Meetings Virtual Desktop Plug-in	Cisco Webex LLC	3/24/2023	209 MB	43.2.1.18
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Check if meeting plugin is running from task manager.

 webexvdi.exe	28736	Running	yinpu	00	53,104 K	x86	Webex Me
--	-------	---------	-------	----	----------	-----	----------

- Meeting plugin version is not compatible with Meeting app version

Solution: Please check the [Compatibility List](#).

- System does not meet our requirement

Solution: Please check system requirements from [Prepare](#).

Meeting may not VDI optimized due to...

- HVD is in a vGPU environment - NVIDIA vGPU

Solution: Add below registry key on HVD side.

key name	type	value
HKEY_LOCAL_MACHINE\SOFTWARE\Cisco Spark Native\isVDIEnv	REG_EXPAND_SZ	true

*For 32bit OS, add registry key to
Computer\HKEY_LOCAL_MACHINE\SOFTWARE\WOW6432Node\Cisco
Spark Native*

- There's already one VDI meeting launched on HVD.
One virtual channel only support one VDI optimized meeting.
- Thin client plugin also is running on HVD side.

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