

WHITEPAPER

VC Framework

Virtual Channel Solution

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Workflow Solutions



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Table of Contents

1. Introduction - Why Consider Using The Citrix VC SDK?	3
2. Why Choose The VC Framework from Devacon?	4
3. Use Case	4
4. Additional Services that Support Deployment of VC Framework	4
5. VC Framework features	5
6. What you can do	5

1. Introduction - Why Consider Using The Citrix VC SDK?

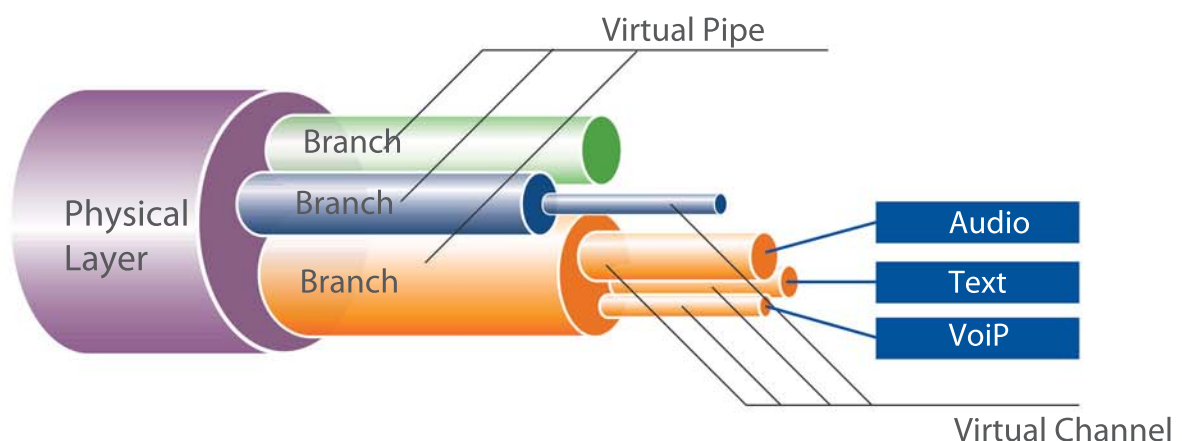
The Citrix XenApp solution is designed to simplify the process of communication between remote employees and offices, and has subsequently created a plethora of communication possibilities between applications running on client devices and those in terminal sessions. Delivering Windows apps as secure services, the Citrix XenApp mobilizes and increases user productivity in businesses across all sectors of the enterprise (where there are varying levels of performance, personalization, and flexibility requirements).

The XenApp also enables virtual delivery of Windows apps in a way that is optimized for the type of device being used, as well as for the network.

However, when a customer's needs are for out-of-the-box functionalities, there is only one way to address them; by developing a Citrix Virtual Channel using Citrix Virtual Channel Software Development Kit (VCSDK). Development efforts for such a project is resource intensive and requires in-depth OS API knowledge (multithreads, interprocess communications, to name a few) as well as in-depth knowledge of C/C++. When developing an application within the .NET framework, it is quite challenging to work within disparate systems; .NET and Win API. When developing a solution with the intended use of audio playback, there should be caution.

Besides audio, there are other scenarios for companies to transfer data between the client and the server. For example, if the local driver of a PC is mapped in the Citrix session, you can copy files and folders from the PC to the server. Such a solution may make sense at first; however, the transfer of the audio may start but the duration can be very long and will interrupt the audio playback several times. In a company, this copying process may take seconds, but out of the office, it may take minutes. Moreover, if the network/internet connections are weak, then the transfer can be interrupted for more than an hour. The result of this is a frustrating user experience due to wasted time. The reason is that in the Citrix session, the communication is done in one line. For example, when opening a PDF file and the user begins to scroll up or down it needs a substantial amount of data bandwidth, and in the meantime, all other applications will be unusually slow or look like they freeze.

The only way to control the data transfer is by using the VCSDK from Citrix, which delivers 32 virtual channels. Over these channels, you can handle your process and achieve the required solution.



2. Why Choose The VC Framework from Devacon?

With over ten years of development invested in the Devacon VC Framework, this robust solution enables companies to create their desired custom virtual channel in the shortest possible amount of time and without the need for extensive programming knowledge, making the Devacon VC framework the solution to the problems listed above. The Devacon VC Framework integrates with the VCSDK from Citrix and allows interfacing between the server and client. The company developers do not need a deep understanding of the VC Citrix SDK or a deep understanding of how to integrate the interfaces with their software.

Adjustments to this product can be made in the short-term and can minimize the cost for customers when developing their solutions from the ground up. Devacon has focused on providing this ability to create a VC for anyone who needs it by making this framework available for purchase or on a licensing basis. Additionally, once developed/compiled, add-ons are available for both Citrix ICA and Microsoft RDP with minor modifications.

The VC Framework add-on is installed on a Windows PC and includes all necessary libraries to communicate between the client and the server. An icon on the task line delivers visual feedback to the user to inform him if there is communication.

Moreover, if organizations are not dependent on Windows clients, they can be used as an add-on for Citrix ICA for Linux and FreeRDP. This allows companies to roll out their solution and not to be limited only to Windows PC's.

3. Use Case

An example of this is integrating a VC into the consumer workflow by synchronizing data between Outlook on a local PC and an ERP/CRM system running the Citrix session. The VC framework from Devacon enables users to work in the Citrix Session and enable the ERP/CRM to show all the required information on Outlook, which is configurable to populate in the inbox, calendar, task, and so on. This information synchronizes via our VC Framework. The user working in this Citrix session can invoke any Outlook function from inside the Citrix session. The VC framework allows users to have a barrier-free workflow, without feeling as if they are working on two different levels. The advantage is that the synchronization is done in the background and any changes on the client or server side are affected in real time. Even if the data file size is large, this is not a problem. Without the VC Framework, a communication interruption begins the synchronization process from the outset. If the problem occurs again, it will begin a continuous loop.

VC Framework can transfer data with the proper protocols. Moreover, if an interruption occurs, the synchronization starts, not from the beginning, but from the stopped positions. This is an essential feature because interruptions happen for many reasons and without this feature, the restart of the synchronization costs the working time of the employer and losing the acceptance of the solution.

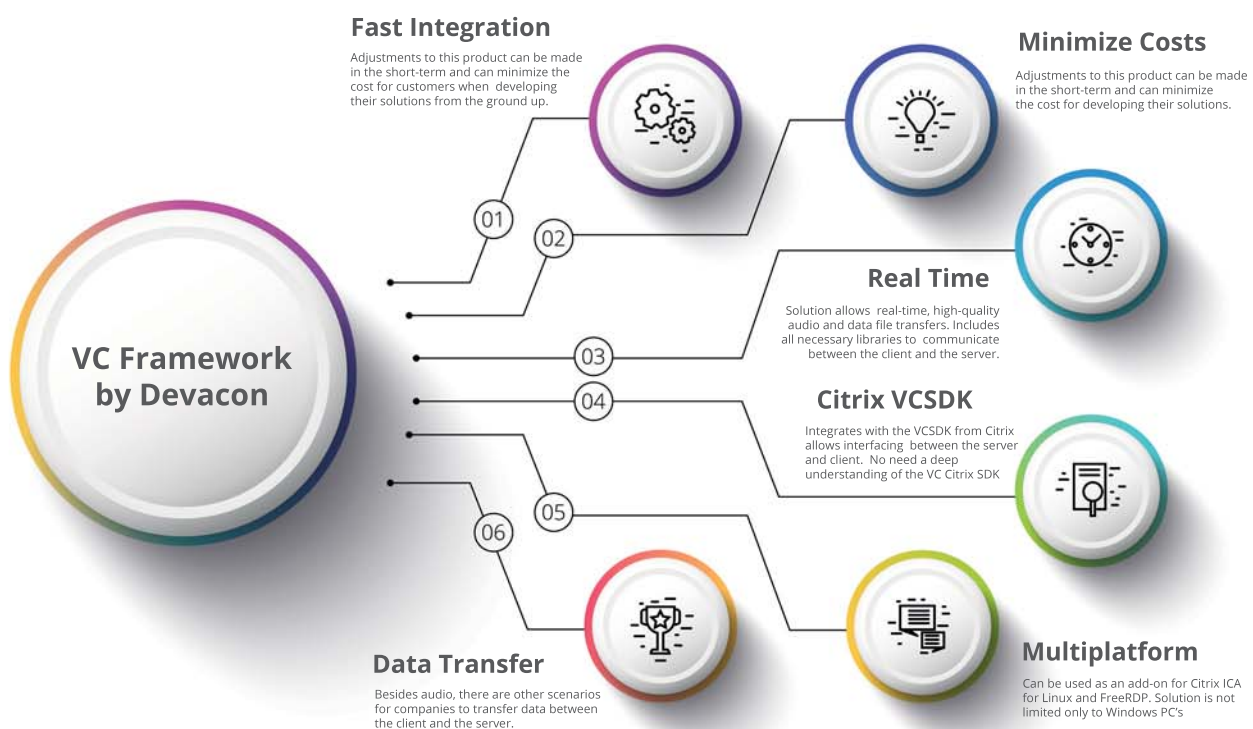
4. Additional Services that Support Deployment of VC Framework

We have extensive experience with .NET and Win32 coding, including VC development. Additionally, we have many ready-to-use solutions for virtual channel scenarios. For example, our team of developers can create any VC that is needed by their customers. Turn around times for such work is fast and focused. Consultation services are also available to assist companies with VC development efforts.

5. VC Framework features:

The benefits of our Virtual Channel framework include:

- WCF transport and USB HID device communication over Virtual Channels
- Limited and low bandwidth use for background file transfers
- Instantly available sound playback and recording with low bandwidth demand
- Experienced development services provided by Devacon to integrate the VC Framework in complex deployment environments



6. What you can do

Visit Devacon, the manufacturer of the VC framework, to learn more about innovative VC solution. Download one of our online brochures, available in both English and French, to get the information you need about our software and how it can help your company.