Using Common Accessibility & Adaptability Software with Citrix XenApp

Installation, configuration and best-practices when using Window-Eyes, JAWS and MAGic with Citrix XenApp (Presentation Server 4.5)

Accessibility and adaptability software is a subset of assistive electronic and information technologies (generally software and/or hardware products) typically used by people with disabilities or impairments, enabling them to perform tasks that they were formerly unable to accomplish, or had great difficulty accomplishing. Such disabilities or impairments include, but are not limited to, cognitive impairments, learning disabilities, visual impairments, deafness and hearing loss.

This document indicates the necessary installation, configuration and usage steps necessary to successfully virtualize and use the following accessibility software with Citrix XenApp (Presentation Server 4.5).

- Window-Eyes from GW Micro
- JAWS from Freedom Scientific
- MAGic from Freedom Scientific

The XenApp environment tested was XenApp 4.5 Platinum edition (server virtualized on Citrix XenServer) with the 10.2 version of Citrix Program Neighborhood (Citrix XenApp client).

Window-Eyes (GW Micro)

Window-Eyes is screen reader software that makes a computer usable by someone who is blind or has visual impairment. It "reads" information by communicating directly with applications or by gathering information from the display adapter and the Microsoft Windows operating system. It then "speaks" it out loud through a speech synthesizer or sound card, or presents tactile information through a refreshable Braille display.

Installation

Window-Eyes software must be installed on both the XenApp server and the client (local) workstation connecting to the XenApp server. Use the default installation options in both instances.

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Configuration

After installation, enable the ICA virtual channels by selecting (from the windows Start Menu) Programs > Window-Eyes > Advanced Options > Virtual Channel Maintenance. Click the button labeled "Enable Citrix Virtual Channel Support for Window-Eyes".

Publish Window-Eyes on the XenApp server machine.

Using the Software

Launch Window-Eyes locally (on the client workstation) first. Then connect to the Citrix XenApp environment and launch the published Window-Eyes; other published applications may be launched at this point. The speech from the published (remote) copy of Window-Eyes will be transmitted to the local (client) copy of Window-Eyes.

Important Note(s):

If Window-Eyes is installed on the same system as JAWS and/or MAGic, rename fscvd.dll to fscvd.dll.old in the C:\Program Files\Citrix\ICA client workstation directory; this will enable Window-Eyes to function properly. Rename this file back to fscvd.dll in order for JAWS and MAGic to function properly.

JAWS (Freedom Scientific)

JAWS (an acronym for Job Access With Speech) is also a screen reader, a software program for visually impaired users. Its purpose is to make personal computers using Microsoft Windows accessible to blind and visually impaired users. It accomplishes this by providing the user with access to the information displayed on the screen via text-to-speech or by means of a Braille display and allows for comprehensive keyboard interaction with the computer.

Installation

Make sure that each machine has a graphics card that is standard VGA or better; otherwise, JAWS may exhibit unexpected behavior.

JAWS software must be installed on both the XenApp server and the client (local) workstation connecting to the XenApp server.

On the server machine: From the command line, run the installation program with the `/type remote` arguments (e.g., `j10.0.512.exe /type remote`), then choose Typical installation.

On the client machine: Launch the installation program, choose Custom installation, and select the option to "Install the Remote Access Client."

Configuration

If the Citrix XenApp client was installed prior to JAWS, the necessary DLLs will automatically be placed in the proper directories. If the Citrix XenApp client was installed after JAWS, launch JAWS on the client machine, go to the Options Menu, select Basic Settings, then select the Advanced button. Check the box to "Enable Remote Access Client." This process will ensure that the necessary DLLs are installed correctly.

Publish JAWS on the XenApp server machine.

Using the Software

Launch JAWS locally (on the client workstation) first. Then connect to the Citrix XenApp environment and launch the published JAWS; other published applications may be launched at this point. The speech from the published (remote) copy of JAWS will be transmitted to the local copy of JAWS.

Important Note(s):

The Professional version of JAWS with a Remote Access license is required for this configuration.

MAGic (Freedom Scientific)

MAGic is a software solution ideally suited for computer users with low vision, or anyone who spends extended periods of time in front of a computer screen. MAGic lets users magnify their computer screen from 1 to 36 times its usual size. MAGic screen magnification software not only increases the size of what you see on a monitor, but MAGic with Speech also speaks aloud screen contents.

Installation

Make sure that each machine has a graphics card that is standard VGA or better; otherwise, MAGic may exhibit unexpected behavior.

Install the Citrix XenApp client on the client (local) workstation prior to installation of MAGic.

On the server machine: From the command line, run the installation program with the `/type remote` arguments (e.g., `M11.0.1146_ILM.exe /type remote`), then choose Typical installation.

On the client machine: Launch the installation program, choose Custom installation, and select the option to "Install the Remote Access Client."

Configuration

If the Citrix XenApp client was installed prior to MAGic, the necessary DLLs will automatically be placed in the proper directories. If the Citrix client was not installed prior to MAGic, MAGic will need to be reinstalled on the client machine after installing the Citrix XenApp client.

On the client machine: After MAGic is installed, open the Registry Editor (Start Menu > Run > type "regedit" > OK). Navigate to the following key: "HKLM\Software\Citrix\ICA Client\Engine\Configuration\ Advanced\Modules\ICA 3.0. Modify the VirtualDriver entry. Delete the last 3 entries (SSPI, TwainRdr, and UserExperience) in that key. Close the Windows Registry Editor.

Note: If the customer's environment uses a high number of virtual channels, it may be necessary to remove more entries from the Windows registry. For more information about all the available channels, please refer to Knowledge Base article CTX121359.

Publish MAGic on the XenApp server machine.

Using the Software

Launch MAGic locally (on the client workstation) first. Then connect to the Citrix XenApp environment and launch the published MAGic; other published applications may be launched at this point. The speech and screens from the published (remote) copy of MAGic will be transmitted to the local copy of MAGic.

Important Note(s):

The Professional version of MAGic with a Remote Access license is required for this configuration.

On the client machine, if the option to "Install the Remote Access Client" is **not** selected on install, MAGic will need to be reinstalled.

If the Citrix XenApp client was not installed when MAGic was installed, MAGic will need to be reinstalled on the client machine after installing the Citrix XenApp client.

If MAGic is to be installed on the same system(s) as JAWS, it is recommended that JAWS be installed first. Also, on the client machine, "Enable Remote Access Client" **must** remain selected in JAWS; since MAGic and JAWS share DLL files, this setting needs to be consistent in both products. This may be resolved in future versions of Freedom Scientific's software.