

Application Note

Amulet Hotkey GPU Switcher

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Background

There are occasions where an operator, who normally connects to a remote hardware host using a quad-head-video PC-over-IP® (PCoIP®) zero client, must instead connect to the same host using a dual-head-video software PCoIP client running on PC/laptop under VMware® View®. For example, a user might work on a quad screen configuration in the office but use only a dual head computer or laptop running View to connect to the same session from home.

In these circumstances, the View session would only connect to the first two video heads output by the remote host, leaving heads 3 and 4 inaccessible to the user. This would mean that the user would have no control of GUI elements presented on these inaccessible heads.

Our objective in developing this Windows service was to overcome this problem by helping the remote host to identify what type of zero client was being used and adapt its video output accordingly.



Overview

The Amulet Hotkey GPU Switcher service enables a seamless user experience when switching between a quad-video-head hardware zero-client and a dual-video-head software client to connect to a PCoIP session. This is accomplished by detecting (at the host end) which of these methods is currently being used to connect to the session and ensuring that graphics output appears only on the appropriate video heads. This avoids a situation where a previous quad-head (hardware client) session results in a Windows desktop stretched over four screens when only two exist for output.

Using the previous example, it is now possible for a user to start working on their blade workstation via a DXR4-iP (four heads) whilst at work, leave the workstation on and then reconnect to their session whilst at home via VMware View soft client (two heads).

Installation

This Windows service was developed for deployment in a Microsoft® Windows® 7 64 bit environment. The installer can be run either by double-clicking on its icon or via the command line. For mass deployment, a silent install can be completed by invoking the installer using a batch file or script and supplying the switch /S for example - C:\ExamplePath\InstallGPUSwitch_svnXXX.exe /S where XXX will be a 3 digit version number. An uninstall link will be placed in the Start Menu under the Amulet Hotkey folder.

The service will be installed to C:\ProgramData\AmuletHotkey and, assuming that VMware View Agent is correctly installed, should start the service vmGPUSwitch upon completion. After this point, the user will not need to intervene – the service will deal with sessions automatically.

GPU Switch Service will generate human readable logfiles in the VMware log directory (C:\ProgramData\VMWare\VDM\logs\) named gpuSwitch-log-YYYY-mm-dd.txt where YYYY is the 4-digit year, mm the 2-digit month and dd the 2-digit day code when the file was created. The service will switch to a new log file if the current file was created on a different date and is more than 10k bytes in size. If GPU switch service issues will cause an entry to be recorded in the windows log files.

