Summary
In a virtualized environment, using multiple monitor configurations in mirror mode with XenClient Enterprise differs from the conventional shared monitor paradigm. Different results may occur depending on the graphics card installed in a machine. To the best of its ability, XenClient Enterprise tries to emulate the method in which Windows manages resolutions and aspect ratios for multiple monitors.

Background
XenClient Enterprise has made significant changes to the method in which it handles multiple monitors, in particular, its approach to how resolutions are calculated in mirror mode. The current method is what Windows uses natively when using multiple monitors, which is to preserve the aspect ratio of each monitor used.

Using an Intel Graphics Card
On an Intel system, XenClient Enterprise chooses the same resolution for both monitors and then sets the monitors to their native resolutions. The Engine then sets the CRTC scaling such that the images on each monitor have the proper aspect ratios. This behavior may cause letterboxing, displaying black bars on either the top/bottom of the screen or left/right of the screen, depending on the differences in the aspect ratios of the monitors.

Using an ATI Graphics Card
On machines with an ATI card installed, CRTC scaling does not work. The chosen resolution will cause the picture to show up on the upper-left corner with black bars on the right and/or bottom of the screen.

Controlling the Display Using the Engine Display Control Panel
Use the Displays Control Panel applet to change the screen resolution and position of displays connected to the machine. This functionality allows you to extend the Windows desktop across more than one monitor, effectively increasing the desktop size.

Note: Mirroring is platform specific for all virtual machines.

When using multiple monitors consider the following:

- When connecting an external monitor to a laptop, the same desktop image (mirror image) appears on the external monitor. Before dragging and dropping a window from the laptop screen to the external screen you must extend the display using the Displays Control Panel.
Desktop machines operate differently; connecting an external monitor results in an extended display by default; no configuration is necessary to drag a window from one screen to another screen.

This Control Panel contains the following elements:

- **Display area** - The display area shows a representation of all attached monitors; only a single outline of a monitor appears if Windows detects only one monitor; monitors can be dragged and dropped in the display area to match the physical orientation of the monitors on the desktop. Click **Identify Displays** to refresh the display if a monitor is attached but not detected.

- **Display options** - This portion of the control panel displays fields that allow you to control the display; use the drop down menu to change the resolution of the active monitor. When setting the primary display, select the monitor in the display area, then select the **Set as primary display** checkbox. Click **Enter Mirror Mode** to mirror an attached monitor.

Click **Reset All Configurations** to revert back to the default monitor display configuration; this feature enables the Engine to restore configuration information for monitors that are added and removed to the computer.
More Information
For more information on using multiple monitors in a Windows 7 environment, refer to the Microsoft page entitled Work and play better with multiple monitors.

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