

Introduction

When using Windows CE with x86 device in commercial application, there is a need for the device to save system settings and other crucial settings during power off. Hive-based registry is the mechanism use to provide this function.

Saving System Settings with Hive-Based Registry

To use Hive-based registry, the Hive-based registry component must be added to the OS Design and build into the final image. In addition to adding the Hive-based registry to the OS Design, appropriate registry entries must add or modified for the final CE image to function properly.

When Hive-based registry is implemented, the resulting CE image will boot in two phases. During the first phase, the system will bring up minimum amount of resources, just enough to read the file system to access the registry settings and continue with the 2nd boot phase to complete the boot process.

Most of the problems associated with using Hive-based registry are caused by improper or incorrect registry entries.

Sample Registry Entries to Support Hive-Based Registry

The registry example present in this article is based on eBox-2300, an x86 device. Here is a set of registry entries to implement Hive-based registry on eBox-2300. eBox-2300 uses EmbedDisk (IDE bootable flash storage). EmbedDisk behave just like a typical IDE hard drive and does not require special driver.

To implement Hive-based registry function with a CE 6.0 image, add the following Windows CE component to the OS Design.

- ATAPI
- FAT File System
- Hive-Based registry
- ROM-only File System

Add the following registry entries to the OS Design:

```
; @CESYSGEN IF FILESYS_FSREGHIVE
; HIVE BOOT SECTION
[HKEY_LOCAL_MACHINE\init\BootVars]
    "SYSTEMHIVE"="\Registry\system.hv"
    "PROFILEDIR"="\Registry"
    "Start DevMgr"=dword:1
    "DefaultUser"="User"
    "Flags"=dword:3

[HKEY_LOCAL_MACHINE\Drivers\Resources\IRQ]
    "Flags"=dword:1000

[HKEY_LOCAL_MACHINE\Drivers\Resources\IO]
    "Flags"=dword:1000

[HKEY_LOCAL_MACHINE\System\StorageManager\FATFS]
    "Flags"=dword:1000

[HKEY_LOCAL_MACHINE\System\StorageManager\Profiles\HDPProfile\FATFS]
    "MountAsBootable"=dword:1

[HKEY_LOCAL_MACHINE\Drivers\BuiltIn\PCI\Template\PCI-PCI-BRIDGE]
```

```
"Class"=dword:06
"SubClass"=dword:04
"NoConfig"=dword:1

; END HIVE BOOT SECTION
; @CESYSGEN ENDIF FILESYS_FSREGHIVE

; @CESYSGEN IF !FILESYS_FSYSRAM
; HIVE BOOT SECTION
;
[HKEY_LOCAL_MACHINE\System\StorageManager\Profiles\HDPProfile\FATFS]
    "MountAsRoot"=dword:1
    "MountPermanent"=dword:1

; END HIVE BOOT SECTION
; @CESYSGEN ENDIF !FILESYS_FSYSRAM
```

Note: If you are using the **ICOP_Vortex86_60B** and later version of BSP, the above registry entries are already included with the OS Design generated with this BSP.