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Registry: HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Keyboard Layout

Configuring the layout with PowerShell

The keyboard layout, or more accurately, the mapping of [scancodes](#) can be configured in the [registry](#) with a simple [PowerShell](#) script.

```
$mapping = [byte[]] (
    0x00, 0x00, 0x00, 0x00,
    0x00, 0x00, 0x00, 0x00,
    0x04, 0x00, 0x00, 0x00, # 3 mapping + 1 ending = 0x04
    0x01, 0x00, 0x3A, 0x00, # 1st mapping: Caps Lock to Escape
    0x3A, 0x00, 0x01, 0x00, # 2nd mapping: Escape to Casp Lock
    0x1D, 0xE0, 0x5C, 0xE0, # 3rd mapping: Left Windows to Left Control
    0x00, 0x00, 0x00, 0x00 # final four bytes
)

new-itemProperty -path "HKLM:\SYSTEM\CurrentControlSet\Control\Keyboard Layout" -name "Scancode Map" -value $mapping -force
```

Github repository [about-Windows-Registry](#), path: [/HKEY_LOCAL_MACHINE/SYSTEM/CurrentControlSet/Control/Keyboard Layout/scancode-map.ps1](#)

After changing the scan map, the computer needs to be restarted.

The following ascii-art tries to show the Scancode map more graphically:

```
"Scancode Map"=hex:00,00,00,00,00,00,00,00,04,00,00,00,01,00,3a,00,3a,00,01,00,1d,e0,5c,e0,00,00,00,00
;
;      |  DWORD 1  |  DWORD 2  |  3 Maps  |  Map 1  |  Map 2  |  Map 3:  |  Final
;      +-----+-----+-----+-----+-----+-----+
;      |           |           |           |           |           |           |
;      |           |           |           |           |           | Final 4 bytes
;      | + 1 0000 |           |           |           |           | Map 3: Left Windows to Left Ctrl
;      | Ending   |           |           |           |           |
;      |           |           |           |           |           | Map 2: Escape to Caps Lock
;      |           |           |           |           |           | Map 1: Caps Lock to Escape
;
; Ctrl (Right)    E01D
; Windows (Right) E05C
```

Github repository [about-Windows-Registry](#), path: [/HKEY_LOCAL_MACHINE/SYSTEM/CurrentControlSet/Control/Keyboard Layout/Scancode Map](#)

Changing the keybaord layout programatically

In order to change values under this registry key, administrator privileges are needed. Sometimes, they are not granted, effectively making it impossible to change the keyboard layout in the [registry](#).
However, it's possible to programmatically create a keyboard hook to change scan codes on the fly. Such a program is [swap_keys.c](#).

IgnoreRemoteKeyboardLayout

Apparently, setting the value of IgnoreRemoteKeyboardLayout to 1 prevents a *Remote Desktop* from using English (or the language of the Remote Client?) as default input language. (as per [Neno Loje's Blog](#))

See also

- [keyboard](#)
- The *kbfltr* example from the Win2K DDK.
- The *default value* of the [registry](#) key [HKEY_LOCAL_MACHINE\SOFTWARE\Microsoft\Windows NT\CurrentVersion\IniFileMapping\KeyboardLayout.ini\Keyboard Layout](#).
- Compare with [HKEY_LOCAL_MACHINE\SYSTEM\CurrentControlSet\Control\Keyboard Layouts](#)

Links

- [Keyboard and mouse class drivers \(docs.microsoft.com\)](#)
- The *Microsoft Keyboard Layout Creator* (*msklc.exe*) create and modify keyboard layouts (.klc files). It can be downloaded [from here](#).