

UsbDk at a Glance

Meet UsbDk

- ✦ UsbDk stands for “USB Development Kit”
- ✦ Universal engine for exclusive access to USB devices on Windows OSes
- ✦ Full user mode API for all device operations
- ✦ Designed to support all types of USB devices
- ✦ Generic API to allow wide range of use-cases
- ✦ Designed with HCK certifications in mind
- ✦ Hiding engine for total detachment of USB devices from OS software stack

Feature set

- ✦ **Totally dynamic device capture**

- No INF files and no self-signing needed
 - Any device can be captured

- ✦ **Totally dynamic device detachment**

- Any device or class of devices may be hidden
 - Prevents Windows from showing "New Hardware" pop-ups for devices without in-box drivers
 - Great for security solutions

- ✦ **Co-existence with original device driver**

- When the device is not captured original driver is loaded by the system automatically
 - If user mode client terminates unexpectedly for any reason system reverts to original device driver immediately

- ✦ **Supports for all types of devices and interfaces**

- Bulk, isochronous, composite, HID, etc.

- ✦ **Being USB filter driver doesn't require WHQL-ing**

- as per Microsoft requirements

Advantages over WinUSB

- ✦ Full feature parity
- ✦ Full support for isochronous devices
- ✦ Full support for composite devices
- ✦ No INF files and no signing needed
- ✦ Open source and community supported

Supported Windows Versions



7	8	8.1	
2008 R2	2012	2012 R2	
XP	2003	Vista	2008

UsbDk is open source

- ✦ Hosted by:
<http://www.spice-space.org>
- ✦ Mailing list:
spice-devel (<http://lists.freedesktop.org/mailman/listinfo/spice-devel>)
- ✦ Maintained by:
Dmitry Fleytman <dfleytma@redhat.com>
Dmitry Fleytman <dmitry@daynix.com>
- ✦ License:
Apache 2.0
- ✦ Git repository:
<http://cgit.freedesktop.org/spice/win32/usbdk/>

Build environment

- Visual Studio 2013 Update 4
- Windows Driver Kit (WDK) 8.1 for Windows 7/2008R2 and later platforms
- Windows 7 DDK (WDK 7.1) for Windows XP, 2003, Vista, 2008
- WiX toolset 3.8 for MSI packages creation

UsbDk components

UsbDkController.exe

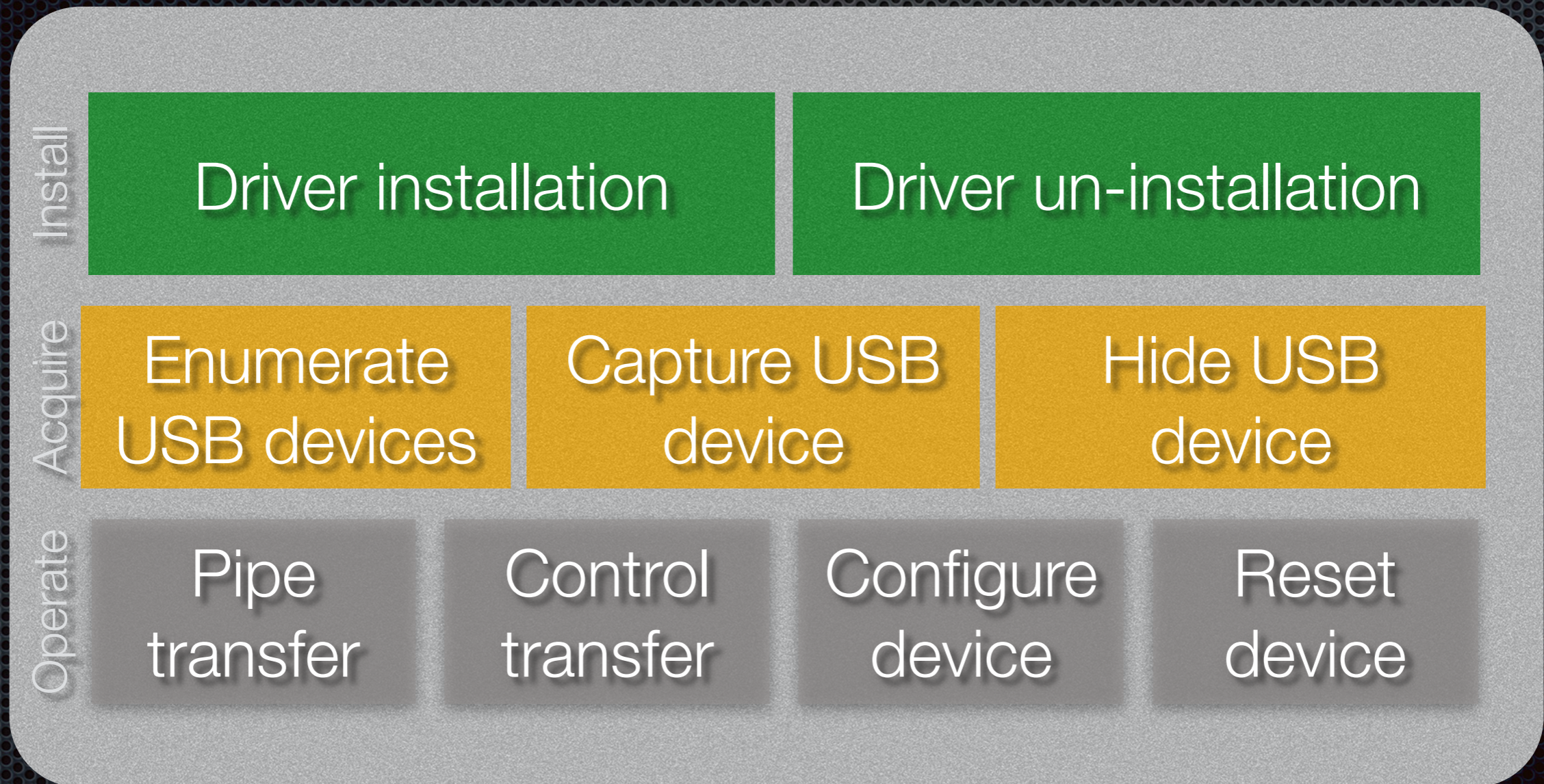
UsbDkHelper.dll

UsbDk.sys

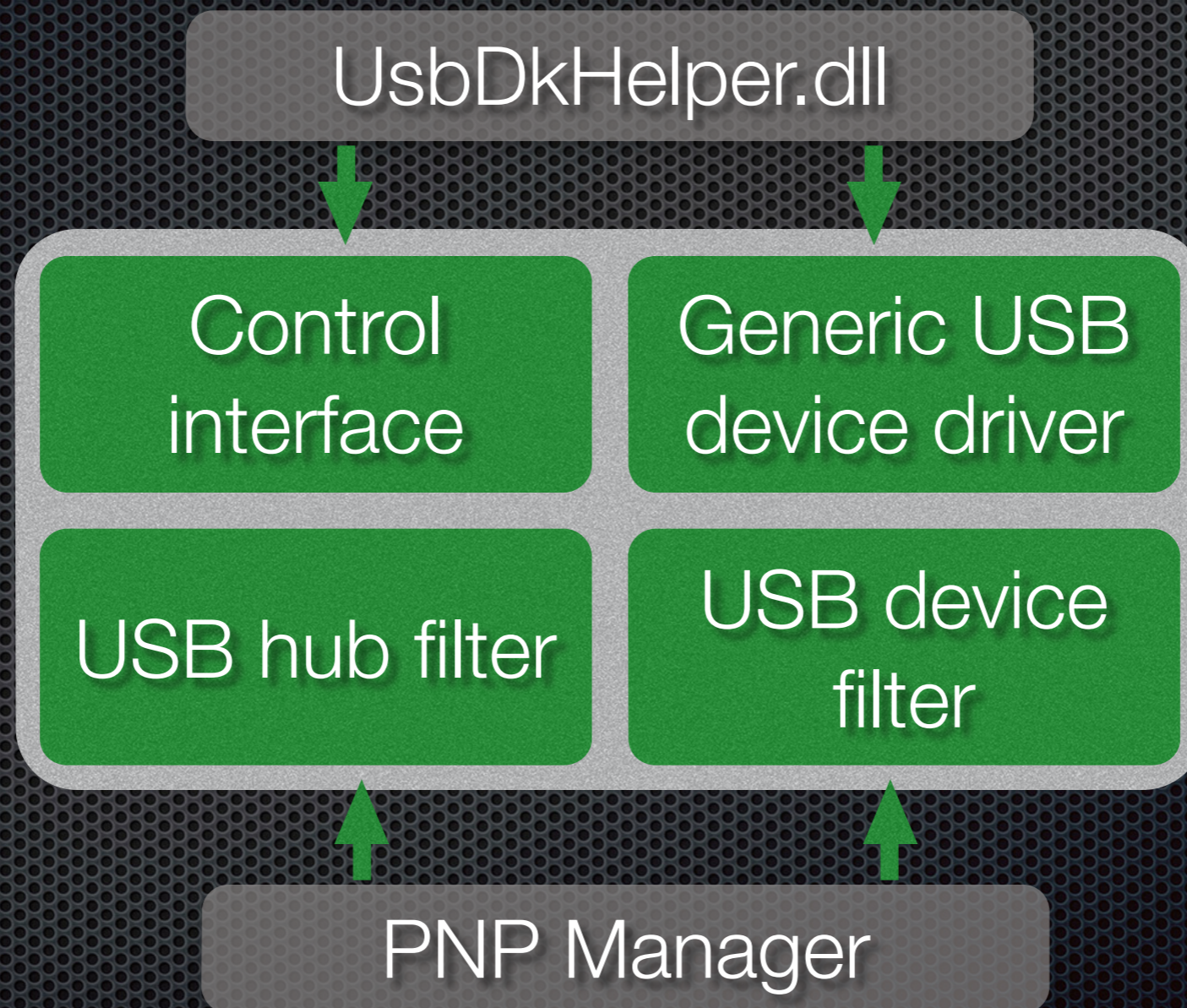
User mode

Kernel mode

UsbDkHelper.dll API



UsbDk.sys structure



Technical Info

- See ARCHITECTURE document at source tree root
<http://cgit.freedesktop.org/spice/win32/usbdk/tree/ARCHITECTURE>
- Software Development Manual
available on www.spice-space.org

Thank you!