

## Linux Kernel Safety RuleDB - Feature #3306

### 132: Usb device reference counting with usb\_get\_dev/usb\_put\_dev and interface\_to\_usbdev

07/30/2012 08:13 PM - Mikhail Mandrykin

<b>Status:</b>	Open	<b>Start date:</b>	07/30/2012
<b>Priority:</b>	Normal	<b>Due date:</b>	
<b>Assignee:</b>	Mikhail Mandrykin	<b>% Done:</b>	0%
<b>Category:</b>		<b>Estimated time:</b>	0.00 hour
<b>Target version:</b>			
<b>Published in build:</b>			
<b>Description</b>			
Proper reference counting should be performed for struct usb_device with the use of functions usb_get_dev/usb_put_dev.			
<pre>/**  * usb_get_dev - increments the reference count of the usb device structure  * @dev: the device being referenced  *  * Each live reference to a device should be refcounted.  *  * Drivers for USB interfaces should normally record such references in  * their probe() methods, when they bind to an interface, and release  * them by calling usb_put_dev(), in their disconnect() methods.</pre>			
Usually the reference count is increased in probe() handler and decreased in disconnect()/exit() handler. It look like interface_to_usbdev() macro is often used in probe() handler to get the reference to usb_device by the reference to usb_interface.			
So the rule may be initially formalized in the following way: after acquiring a reference to struct usb_device with usb_interface macro one should increase the corresponding reference counter with usb_get_dev and then decrease it with usb_put_dev at finalization.			
<b>Links</b>			
Sample bugfixes <a href="#">927c3fa</a>			

#### History

##### #1 - 07/31/2012 08:12 PM - Mikhail Mandrykin

- Assignee set to Mikhail Mandrykin

##### #2 - 08/15/2012 07:49 PM - Mikhail Mandrykin

- Status changed from New to Open

##### #3 - 09/26/2014 07:14 PM - Vitaly Mordan

Unnecessary header  
#include <linux/usb.h>  
may cause Aspectator to failed at 'instrumentation' stage.

##### #4 - 10/20/2014 12:58 PM - Vadim Mutilin

- Description updated