

Troubleshoot the "USB Out of Bandwidth" Error Message

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Introduction

USB devices on Microsoft Windows computers are organized as host controllers that are attached to hubs. These hubs can be either external devices, which is typical, or an internal device(s). Each host controller has a limited amount of bandwidth that is divided up among all devices connected to it. Too many USB devices attached to one USB port on a PC, such as when using a USB hub, may result in the user receiving a Windows USB Out of Bandwidth error message. This document discusses possible causes and solutions to this error message. More details on this can be found in Microsoft Knowledge Base article 255954 .

Prerequisites

Requirements

There are no specific requirements for this document.

Components Used

The information in this document is based on these software versions:

- Microsoft Windows 2000 or XP

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Conventions

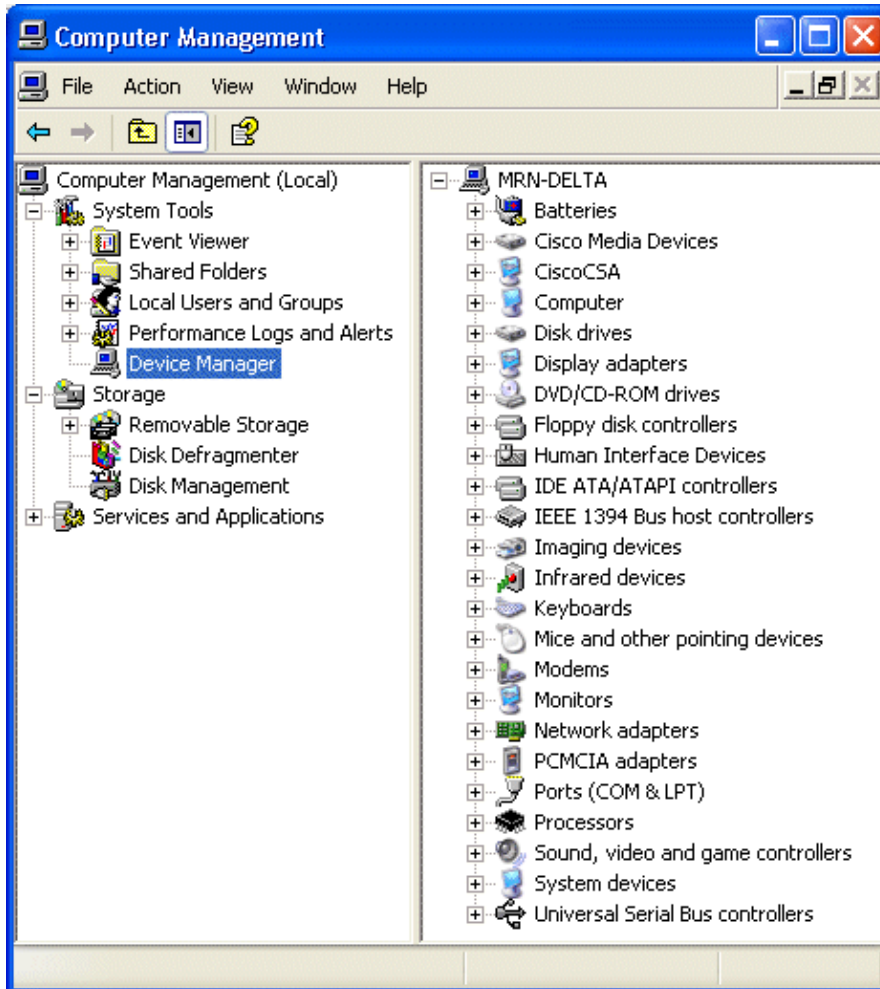
For more information on document conventions, refer to the Cisco Technical Tips Conventions.

Determine the Amount of Bandwidth Your Host Controller is Using

The first step to determine the amount of bandwidth being used by your host controller is to summons the Device Manager for your PC. To accomplish this, perform these steps:

1. Right-click the **My Computer** icon, visible either on your desktop or at the top level of your Start menu.
2. Select the **Manage**, which summons the Computer Management screen.
3. Select **Device Manager**. This fills the right-hand pane of the management window with a tree view of all the devices in your system, as shown in Figure 1:

Figure 1



4. Once you are in Device Manager, check the status of the USB bandwidth as follows:
 - a. Right-click on the plus (+) sign immediately to the left of the Universal Serial Bus controllers tag near the bottom of the right pane.

You should see listed all of your host controllers, hubs, and various other USB devices you may already have installed. An example of this is shown in Figure 2:

Figure 2

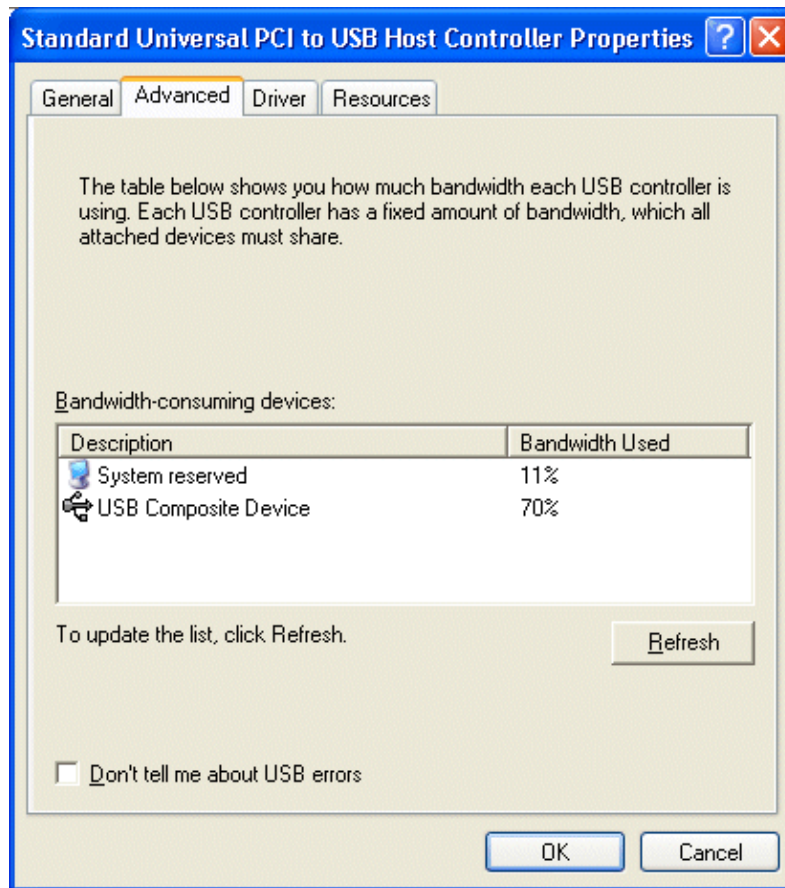
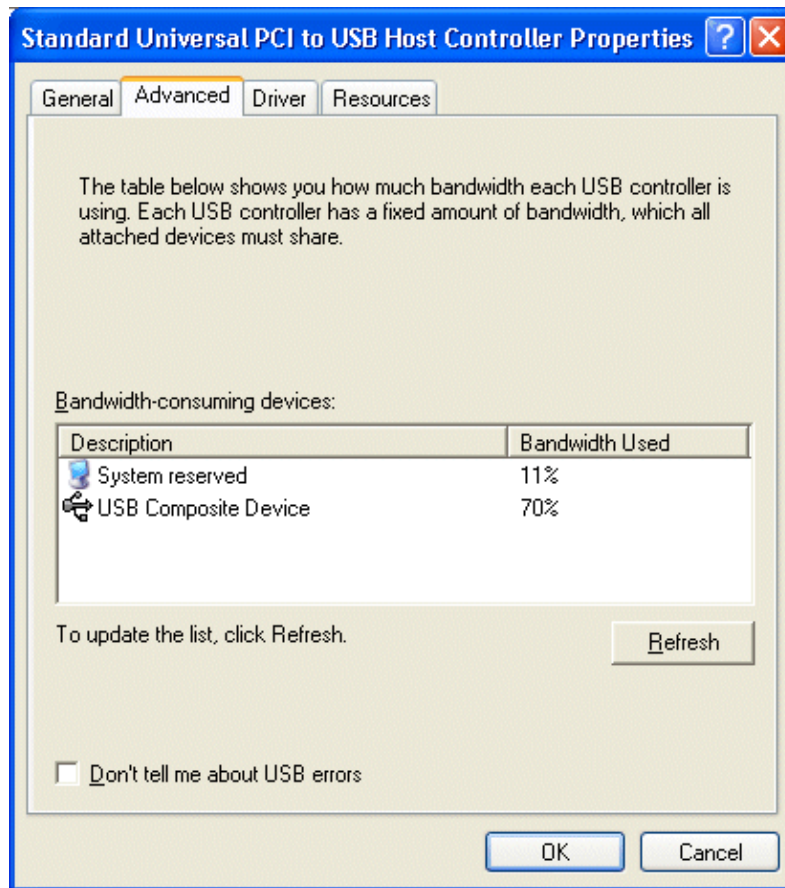


Figure 2 shows a typical configuration, in this case it is for an IBM notebook plugged into a docking station. This PC has two host controllers connected to two USB ports on the main PC itself. It also has a third host controller in its docking station, which is connected to a single USB port. Plugged into that USB port is an external hub. Each of those three USB controllers has a limited amount of bandwidth.

- b. Highlight the device you wish to examine, right-click and select **Properties**.
- c. Select the **Advance** tab. At this point you will see the total bandwidth being used for this host controller, as show in Figure 3. In this example it shows 81 percent being used. Each hub has 100 percent bandwidth possible for use.

Figure 3



This particular host controller has a Cisco VT Camera plugged in. What this means is that you may run out of bandwidth if you try to connect another high bandwidth device to that host controller. Examples of such devices include other video cameras, USB headsets, and scanners. In this particular case, a prudent user should connect his or her USB headset or other USB device to a different controller. On this particular PC, that means plugging it into one of the two available ports on the main notebook body itself.

What to do if you are out of Available Host Controllers

If Windows or the Cisco VT Advantage application tells you that you have run out of bandwidth on a particular host controller, you will have to remove enough devices from the controller in question to meet your bandwidth budget. In most cases, this means moving a device from one hub to another.

If you do not have any spare USB ports attached to different host controllers, you will need to add a new host controller. On a desktop machine, this means you need to add a new USB card to your internal PCI bus. On a notebook, this means you need to add a new USB card in a PCMCIA slot.

Related Information

- [Voice Technology Support](#)
- [Voice and Unified Communications Product Support](#)
- [Recommended Reading: Troubleshooting Cisco IP Telephony](#)
- [Technical Support – Cisco Systems](#)

