

Multistation Storage Support README

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Introduction

Storage devices can be assigned to a station and operated independently in a multistation environment by installing packages provided by Useful. Storage devices can alternatively be shared by all stations. Supported storage devices include floppy drives, optical drives and flash memory devices.

Supported Linux Distributions for Multistation Storage

- Fedora 6
- openSUSE 10.1
- SLED 10

If you are using one of the distributions listed above you will not need to manually configure your system. It is still *possible* that other Linux distributions not listed above could work with Multistation Storage. Useful's Multistation Storage software can be installed on many different distributions but Useful does not guarantee positive results on all of them.

Note: Official Multistation Storage support is currently only available for Gnome Desktop environments.

Prerequisites for Multistation Storage Support

General Requirements

These are requirements for all Linux distributions:

- **Desktop Multiplier** must be installed before Multistation Storage Support can be added.
- **UDEV** version 085 or higher must be installed.
- **HAL** version 0.5.8 or higher must be installed.

Installation

Use the following procedure to install Useful's Multistation Storage package:

1. Download the software.
 - For the RPM based Linux systems:
<http://www3.userful.com/dm/Multistation-Storage-Support.zip>
 - (Debian based Linux systems are not currently supported.)
2. Uncompress the Multistation Storage bundle by running `$unzip <zip file>`. For example:

```
$unzip Multistation-Storage-Support.zip
```

3. Install the Multistation Storage package by running the INSTALL script in the directory created in the previous step:

```
$bash INSTALL
```

4. Reboot the computer.

Device Assignment

Storage devices will be automatically assigned to the same station as the keyboard if you connect them to either

- the same powered USB hub as the keyboard, or
- a USB port built into the keyboard.

It is recommended that each station uses its own powered USB hub to connect one keyboard/mouse pair along with your USB storage devices. This will allow them to be assigned to the same station automatically.

Any device plugged directly into a USB keyboard (if the keyboard has a USB port) will also be assigned to the same station as the keyboard. In this scenario, some devices may not function correctly due to insufficient power provided by the keyboard's USB ports. Please refer to the "Known Issues" section for more information.

Multistation storage devices are secured by permissions. Each storage device will appear on all stations. For example, if there are four flash memory devices plugged in, all four will appear on all user sessions. However, if a user tries to open a storage device assigned to another station, they will receive an error that says "Permission denied".

Sharing Storage Devices

To make a storage device available to all stations, simply use a USB port on the computer's system unit. Since these ports do not belong to any station, the device will be "shared" in the sense that any station can access it.

Once a user opens (mounts) the device, it will belong to that user's station. Other stations will be unable to use the device. When the user unmounts the device, it will again be free for other stations to claim.

Known Issues

Power issue with unpowered USB hubs and keyboard USB ports

Some USB devices will not work if they are plugged into unpowered USB hubs (which include USB ports in keyboards). If the hub is unpowered, all devices using it will share power. Some devices may expect or need more power from the USB port, and the shortage will cause them to malfunction.

If you have any problem with your USB devices, it is recommended that you use a powered USB hub.

Unstable USB 2 support in Linux kernel

If you have any problem with your USB storage devices, ensure that USB 2 support is disabled in the BIOS before you try anything else.