This procedure will describe how to enable the USB ports of the following Dell Servers with **Windows 2000 Pro/Server**:

- GX270
- PE400SC
- PE2600
- PE2650

This procedure can be used for New or existing Servers in the field.

1. BEFORE YOU ENABLE

USB depends upon the ACPI HAL in your OS. This is a function of the Ghost image, and some images have erroneously been configured with the MPS or Standard PC HALs. There is no known way to change your HAL after the fact and have a bootable system. Your only choice is to leave USB disabled or re-image your Server with a more recent Ghost.

Verify your HAL is USB compliant.

1) Start → **Programs** → **Administrative Tools** → **Computer Management**.

2) Select **Device Manager** → **Computer**. You will notice a computer type.

ACPI Multiprocessor PC	Supports USB
ACPI Uniprocessor PC	Supports USB
Advanced Configuration and Power Interface PC	Supports USB
MPS Multiprocessor PC	USB **NOT Supported**
MPS Uniprocessor PC	USB **NOT Supported**
Standard PC	USB **NOT Supported**

If your OS is Not Supported then please forward your server information (ie. PE2500, Service Pack) to Derek Braendel in T.I.S. group. You can not continue to enable your USB.

2. ENABLE YOUR USB

Each model of server works a little differently. Refer to the specific Server's model section for enabling the USB port.

2.1 GX270

3) Enable the USB

   a) Restart the Server and hit **<F2>** to **Enter Setup**.

   b) Select **Integrated Devices** and set the following to **On**.

      - USB Emulation **On**

- USB Controller **On**

c) Hit **<ESC>** twice and select **Save Changes and Reboot**.

4) Log into Windows and go into Device Manager. Windows should have automatically loaded the driver. You should see the following:

- Universal Serial Bus Controllers
  - 5x Standard Enhanced PCI to USB Host Controller.
  - USB 2.0 Root Hub
  - 4x USB Root Hub

2.2 PE400SC

5) Enable the USB

a) Restart the Server and hit **<F2>** to **Enter Setup**.

b) Select **Integrated Devices** and set the following to **On**.

- USB Emulation **On**
- USB Controller **On**

c) Hit **<ESC>** twice and select **Save Changes and Reboot**.

6) Log into Windows and go into Device Manager. Windows should have automatically loaded the driver. You should see the following:

- Universal Serial Bus Controllers
  - 5x Standard Enhanced PCI to USB Host Controller.
  - USB 2.0 Root Hub
  - 4x USB Root Hub

2.3 PE2600

7) Enable the USB

a) Restart the Server and hit **<F2>** to **Enter Setup**.

b) Select **Integrated Devices** → **USB Controller**.

c) Select **On with BIOS Support** and hit **<ESC>**.

d) Hit **<ESC>** and select **Save Changes and Reboot**. This is important since the USB won't show up in the IRQ scan for the next step otherwise.

8) Configure IRQ assignments.

a) Restart the Server and hit **<F2>** to **Enter Setup**.

b) Select **PCI IRQ Assignments** and select the following IRQs.

2600	Slot Preff. (option)	IRQ
Perc 4 Raid Controller	**Internal**	**5**
Adaptec 7899 U160 LVD SCSI	**Internal**	**disabled**
Adaptec 2944 UWD PCI	**1 (only)**	**11**
Adaptec AHA39160 LVD Ultra 160	**4,5 (any)**	**11**
Intel Pro/ 1000 Gigabit PCI	**7 (2-7)**	**5**
Digi Acceleport 4 PCI	**2 (2-7)**	**5**
Emulex LP8000, LP9002	**1 (any)**	**5**
Qlogic QL2200 FC Controller	**1 (any)**	**5**
USB	**internal**	**11**

9) Hit **<ESC>** and select **Save Changes and Reboot**.

10) Log into Windows and go into Device Manager. Windows should have automatically loaded the driver. You should see the following:

- Universal Serial Bus Controllers
  - Standard Universal PCI to USB Host Controller.
  - USB Root Hub

2.4 PE2650

1) Enable the USB

a) Restart the Server and hit **<F2>** to **Enter Setup**.

b) Select **Integrated Devices → USB Controller**.

c) Select **On with BIOS Support** and hit **<ESC>**.

d) Hit **<ESC>** and select **Save Changes and Reboot**. This is important since the USB won't show up in the IRQ scan for the next step otherwise.

2) Configure IRQ assignments.

a) Select **PCI IRQ Assignments** and select the following IRQs.

2650	Slot Pref (opt)	IRQ
Embedded RAID controller	**internal**	**10**
Embedded Remote Access	**internal**	**5,11,10**
Embedded Serverworks USB	**internal**	**7**
Embedded Broadcom Nic	**internal**	**5**
Adaptec AHA39160 LVD Ultra 160	**3,2,1**	**11**
Intel Pro/ 1000 Gigabit PCI	**2,1,3**	**5**
Emulex LP8000, LP9002	**1,3,2**	**11**
Qlogic QL2200 FC Controller	**1,3,2**	**11**
Adaptec 2944 UWD PCI	**No support**	
Digi Acceleport 4 PCI	**No**	



3) Hit **<ESC>** and select **Save Changes and Reboot**.

4) Log into Windows and go into Device Manager. Windows should have automatically loaded the driver. You should see the following:

- Universal Serial Bus Controllers
  - Standard OpenHCD PCI to USB Host Controller.
  - USB Root Hub