NComputing[™]

Ubuntu Supplement to X350 & X550 User's Guide <u>NComputing X350 & X550 vSpace Software</u> <u>for Linux on Ubuntu 8.04</u>

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Table Of Contents

Overview	<u>3</u>
Prerequisites	3
Installing Ubuntu 8.04	4
Installing the X550-vSpace Software Software Package	5
Using the vSpace Administration Console Window	9
Registering Your Product	10
Adding new users	14
Activating audio output on the stations	15
Changing Video Resolution on the Sessions	15
The X-series Admin Console for Linux	16
USB Port Assignment	19
Uninstalling vSpace	22

Table Of Figures

Figure 1 – File Browser Window	5
Figure 2- X550 Package Installer Window	5
Figure 3 – X550 Package Install Status Window	6
Figure 4 – End user license agreement	6
Figure 5 – Terms of Use Statement	7
Figure 6 – X-series Post-Configuration Message	7
Figure 7 – Installation Finished Message	7
Figure 8 – Administration Console window	9
Figure 9 – Serial Numbers Window Display	10
Figure 10 – Registration Wizard	10
Figure 11 – Customer Information Window	11
Figure 12 – Adding your registration data	11
Figure 13 – Serial Number Selection	12
Figure 14– Verify Information Settings	12
Figure 15 – Registration Status Window	13
Figure 16 – Registration Complete Status Window	13
Figure 17 – Location of audio level control	15
Figure 18 – Identiying console card resolution icon	15
Figure 19 – Current card resolution settting	16
Figure 20 – Changing PCI card resolution	16
Figure 21 – Product Information screen	16
Figure 22 – Station information screen	17
Figure 23 – X-series PCI card information screen	17
Figure 24 – Session information - Identifying "Console Refresh", "Session Stop", and "Session Start" icons	18
Figure 25 – License Information screen	18
Figure 26 – Serial Numbers screen	19
Figure 27 – USB assignment screen	20
Figure 28 – Port Assignment to Station	21
Figure 29 – Identifying the Station number (X350)	21
Figure 30 – USB Storage volume icon shown on Desktop	22
Figure 31 – Uninstalling vSpace for Linux	22

<u>Overview</u>

This document supplements the X350 & X550 User Guide. For basic common information such as safety and regulatory compliance, product overview, card installation and other features of the x350 and x550 please see the X350 & X550 User Guide.

This supplement provides the installation process for the NComputing X350 and X550 vSpace Software for Linux for the Ubuntu 8.04 distribution of Linux and includes instructions for:

- vSpace Software installation for the X350 & X550
- o Instructions for On-line registration
- Configuring audio
- USB to user station assignment
- Console functionality
- Uninstall of the Linux vSpace software

This document assumes the user will be starting from a clean install for the OS.

Prerequisites

The following items are needed to begin the installation process:

- Ubuntu 8.04 (LTS) installation image (It's critical that only a clean install be used, modified images may not operate correctly). (LTS: Long Term Support version released every two years.)
- 2.6.24 kernels built for Ubuntu 8.04 are supported, including (but not limited to) 2.6.24-23generic and 2.6.24-24-generic
- Ncomputing X350 & X550 current vSpace Software Software (x-series_3.0.1479-2_i386.deb or newer) and readme document
- NComputing X350 or X550 PCI card installed in host and connected to at least one XD2 terminal box.
- Sound card (or device) on host system that's supported by Ubuntu 8.04 and has been enabled
- Live internet access is required to install and to register (no offline registration is implemented in this version). Ping register.ncomputing.com or 85.214.42.113 to verify that the registration server is available through the local network.
- v1479-2 (or a more recent version of vSpace) can be downloaded from <u>www.ncomputing.com</u> → Support → Software DownloadS <u>http://ncomputing.com/Support/SoftwareDownloadCenter/tabid/435/language/en-US/Default.aspx</u>

Fully review the release notes supplied for the vSpace release you are installing

Note: An Internet connection must be available during the installation to download and install any dependant packages located in the Ubuntu package repository maintained by the Ubuntu community and to enable registration.

Installing Ubuntu 8.04

You can locate and download Ubuntu 8.04 (LTS) from: <u>http://old-releases.ubuntu.com/releases/hardy</u>. Please use only a clean image from one of the Ubuntu ftp sites as vSpace is designed to work with the kernel, desktop and packages that are included in the LTS version.

- 1. Download Desktop Edition; Ubuntu 8.04 LTS install CD image
- 2. Create Ubuntu 8.04 System CD-R
- 3. Insert Ubuntu 8.04 Disk into System and Power-on/boot the system
- 4. Ubuntu Install screen opens with option(s) for running the installation program and also has function key selectible setting at the bottom of the screen
 - a. Press F4 (function key 4) to access Modes
 - b. Then Select: "Safe graphics mode" (Insures base host video card is correctly identified)
- 5. Use keyboard arrow keys to highlight "Install Ubuntu" and press Enter
- 6. At the appropriate install screens, Select
 - a. Language
 - b. Time Zone Setting
 - c. Keyboard Layout Setting (select appropriate Country)
 - d. Disk Preparation: Select "Guided Option; Use Entire Disk"
 - e. System Administrator Set-up: Enter "User Name" and "Password" Information
- 7. Ready to Install: Press Enter to Proceed
- 8. Installation Completes
- 9. Now Restart/Reboot System
- 10. After the system reboot, the Ubuntu Desktop should come up and present Username login prompts
- 11. Log into the system with appropriate "username and password." The "User" must have system "administrative rights" to continue the installation; however, the Username and password supplied during the system's initial Ubuntu 8.04 install are recognized to have administrative rights. (note that your Ubuntu 8.04 installation should have 2.6.24-23- (or 24) generic kernel installed)

********** Even if prompted following this login, <u>DO NOT INSTALL Ubuntu UPDATES</u> *********

12. Now, copy the X550 Ubuntu 8.04 NComputing vSpace installation file to the desktop.

xseries_3.0.1479-2_i386.deb (or the most recent version of vSpace for Ubuntu)

Installing the X350 & X550 vSpace Software Software Package

13. Click the "<u>Places</u>" pull-down on the Ubuntu Desktop Menu to locate and open the folder containing the Ubuntu 8.04 vSpace software installation file:



Example file = xseries_3.0.1479-2_i386.deb

Figure 1 – File Browser Window

14. Double-click on the installation file name and the package installer will open and start to install the package. If prompted, enter password of user with system administrative rights, then click the "Install Package" button, and installation begins.

The X350 and X550 vSpace Software installs multiple packages for this application:

🔿 Package Installer - xseries 📃 🗆 🗙
Eile <u>H</u> elp
Package: xseries
Status: Requires the installation of 8 packages Details
Description Details Included Files
NComputing Linux Terminal Server
X Series terminal server
This package provides all the necessary drivers and programs to use NComputing's X Series expansion card.

Figure 2- X350 and X550 Package Installer Window

You can track the installation progress via the package install status window.



Figure 3 – X350 & 550 Package Install Status Window

15. When prompted, click the check box, and Accept the: "X Series End User License Agreement" (EULA).

Debconf on steve-desktop	
Configuring xseries	
X Series End-user License Agreement	
 END USER LICENSE AGREEMENT This End-User License Agreement ("EULA") is a legal agreement between you (either an individual or a single entity) and NComputing Co., Ltd. for the software product that accompanies this EULA, which includes computer software and may include associated media, printed materials, and "online" or electronic documentation ("Software Product" or "Software"). 1. IMPORTANT - READ THIS CAREFULLY: YOU SHOULD CAREFULLY READ THE FOLLOWING TERMS AND CONDITIONS BEFORE OPENING THIS PACKAGE OR INSTALLING THE PROGRAM INTO THE COMPUTER. INSTALLING, COPYING, OR USINT THE SOFTWARE CONSTITUTES ACCEPTANCE OF THE TERMS AND CONDITIONS OF I accept the terms of the EULA 	G Help
Cancel Back	orward

Figure 4 – End user license agreement

16. Then when prompted, click the check box, and Accept the "X Series Terms of use Statement":

Debconf on steve-desktop	_ - ×
Configuring xseries	
X Series Terms of Use Statement	
 TERMS OF USE STATEMENT 1. General. The object of the provisions of this Terms of Use Statement is to the proper use of Xtenda(TM) series ("Product"). 2. Description of the Product. The Xtenda product is an ultra thin multi-acce ("UTMA") device that provides remote access to the designated personal co ("DPC") by providing an UTP connection, sound output, keyboard and mouse interface and VGA video port which supports 1024x768 XGA resolution 16bit (65,536) video mode. The Product allows you to remotely access the DPC fi to six (6) additional Multi Box devices depending on the DPC's resource availand usage model of target applications. UTMA technology is mainly designed accept the terms of use statement. 	ss omputer e input sc color rom up ilability ed to
Eack	<u>F</u> orward

Figure 5 – Terms of Use Statement

If the **"xseries post-configuration: Additional steps required**" message window appears, simply click the "Forward" button to continue.

	Install missing dependencies
f you installed this pac satisfied.	kage with dpkg(1) then some of the required dependencies might not be
To make sure that the apt-get -fy install	X Series card is fully functional you must manually run
to let apt-get install ar	w missing dependencies.
	Final steps
If this is the first time y the X Series card. Plea system menu.	ou install the drivers, you need to add some serial numbers to be able to use se open the NComputing Administration Console from your "Administration"
After this, it is necessa reboot the system.	iry that you either restart your display manager and this service, or simply

Figure 6 – X-series Post-Configuration Message

When the X-series vSpace software installation completes, close any window(s) and reboot the system.

veckage inno-obuntu-montres-2.6.24-23-genenc_2.6.24-23.36_isee.deer waa mataked () Terminal		
P Terminal	Package Write-obt	ntu-modules-2.5.24-23-genenc_2.5.24-23.36_i386.deb' waa matalee
	P Terminal	

Figure 7 – Installation Finished Message

After the system reboots, the host desktop will display the Ubuntu login screen, as will any stations connected to the X350/X550 PCI card(s).

Please restart the system.

Using the vSpace Administration Console Window

After reboot, enter a username and password with administrative rights in the login screen, to get to the Ubuntu Desktop. On the menu taskbar, click on:

"System > Administration > NComputing Console";

This launches the vSpace Administration Console. After the initial software installation, the vSpace software will begin an automatic a "30-day Trial Period." The user has complete access to the features of the vSpace software for this period to evaluate the product. In order to use the product beyond the **"30 day trial period"**, the product must be registered.

Also during the trial period a user session is limited to a 1 hour time period, at the end of an hour, the session will be terminated, Another session can then be started from the admin console.

N	vSpace - Administrati	on Console - v3.0.1138	o X
N NOomputing system Stations Station 2 Station 3 Station 4 Station 4 Station 5 Station 5 Station 5 Station 1 Station 3 Station 4 Station 5 Station 5 S	VSpace - Administration	on Console - V3.0, 1138	9 ™
	Technical Support:	http://www.ncomputing.com/ncomputing/support/overview.php	

Figure 8 – Administration Console window

Registering Your Product

Internet connection required.

To register your X350/X550 product(s), right-click the "Golden Lock" icon next to the "Serial Numbers" label in the left-hand console window. That causes the "Serial Numbers" window to open, and lists the serial numbers stored inside the PCI card, the card hardware type, card registration status, and where the serial numbers were obtained.

To launch the vSpace registration wizard, right click the first serial number in the list, and select option "Manage Registration" from the resulting pop-up window. The vSpace registration wizard walks you through the product registration process.

N V	/Space - Admi	nistrai	iion Cons	ole - v3.0.1076	_ • ×
NComputing system	Seria	d Ni	umber	rs	_ ∧ Computing™
Serial Numbers					
	Serial Number	Card	Status	Туре	
	10008857		No: Registe	ered Embedded	
	10015830	X350	No: Registe	ered Embedded	
	=				
	-				
1	1				

Figure 9 – Serial Numbers Window Display

vSpace - Registration wizard. 🛛 🗙			
	Welcome to the vSpace serial number registration program.		
.∧Computung ®			
• • •			
	Please click "Next" to continue with th		
	< Back Next > Cancel		

Figure 10 – Registration Wizard

Click "<u>N</u>ext" to proceed

The wizard then takes you to the "Customer Information" window. You must fill in all the fields provided to continue to the next step.

🗖 V5j	pace - Registration wizard.	X
Customer information		
	Please fill in the following fields:	
	Name:	
Computing*	Company:	
	Co <u>u</u> ntry:	
$) \rightarrow$	Address:	
Desktop Virtualization	Cit <u>y</u> :	
	Zip code:	
000	P <u>h</u> one:	
	Fa <u>x</u> :	
	e- <u>m</u> ail:	
	< <u>Back</u> <u>N</u> ext > <u>Cance</u>	

Figure 11 – Customer Information Window

➢ Fill out all fields on this form

 vSpace - Registration wizard. 			
Customer information			
	Please fill in the fo	llowing fields:	
	Name:	YOUR NAME	
_rcomputing *	Company:	YOUR COMPANY	
	Co <u>u</u> ntry:	YOUR COUNTRY	
$) \Rightarrow$	Address:	ADDRESS INFO	
Desktop Virtualization	Cit <u>y</u> :	CITY	
	<u>Z</u> ip code:	POSTAL CODE	
	Phone:	PHONE INFO	
0.00	Fa <u>x</u> :	FAX INFO	
	e- <u>m</u> ail:	E-MAIL ADDRESS	
	< <u>-</u>	Back <u>N</u> ext > <u>C</u> anc	e

Figure 12 – Adding your registration data

> Then Click "<u>N</u>ext" to proceed

The next screen will be pre-populated with the serial numbers of the NComputing PCI cards installed in this host. Each serial number will already be checked and cannot be unchecked.

- vs	ipace - Registration wizard. 🛛 🔍
Serial number selection	
	Register Online Your serial number list:
Computing*	Serial Number
	✓ 10008857
1	☑ 10015830
Desktop Virtualization	
0000 000	Please chocse the serial numbers that you want to register
	< Back Next > Cance

Figure 13 – Serial Number Selection

"Click "Next" to proceed"

The next window in the wizard display the information you entered via the earlier registration screen and host's currently identified serial numbers. Verify that the information shown is correct.

vSpace - Registi	ration wizard. X					
Please check your settings						
Ready to Register Online						
Customer information	Number(s) to Register					
Name: YOUR NAME	10008857					
Company: YOUR COMPANY	10015830					
Country: YOUR COUNTRY						
Address: ADDRESS INFO						
City: CITY						
Zip code: POSTAL CODE						
Phone: PHONE INFO						
Fax: FAX INFO	Serial Number: 10008857					
e-mail: E-MAIL ADDRESS	Status: Not Registered					
Please check your registration informa	tion.					
If you are satisfied with the settings, click "	Next" to start the registration process.					
	< Back Next > Cancel					

Figure 14– Verify Information Settings

Click "<u>N</u>ext" to proceed

Page 12

The installation wizard then contacts the online registration server, and the "registration in process" status screen is displayed.



Figure 15 – Registration Status Window

Once the installation wizard completes its communications with the online registration server, one of the following two screens will be displayed. If the registration was successful, the "Trial Period" status is removed from the vSpace software, and it is replaced with a standard software license. If you can get the "Registration process failed!" screen, the PCI card was previously registered to another machine. In this case, the vSpace software stays in "Trial Mode."

0	separa - tradictication, whereas	Space - Registration wizard. 🛛 🗙
Finished		Finished
Computu	Registration process complete! Ig*	Registration process failed!
Desktop Vintualizat	Serial Number 10008857 was registered! Serial Number 10015830 was registered!	Desktop Virtualization
·		
	Finish	

Figure 16 – Registration Complete Status Window

Adding new users

If you have not yet created Users for this Linux installation, now is a good time to do so using the Linux GUI.

Or

You can launch an Ubuntu Terminal console with sufficient rights to create new users **Enter the command "sudo adduser <username>"** (The variable **username** refers to the userid or name of the user which should be created, and you will be prompted for the administrative password before the "adduser" command is executed.) (sudo is the "superuser do" command, and in this context it executes a single "adduser".command as the "superuser")

For example: sudo adduser user2

For each new user, the system asks a series of questions needed to create the account. After all questions have been answered, the new user will be active on the system and he/she can login at any NComputing X550/X350 terminal attached to this system.

Activating audio output on the stations

Audio output on the X550/X350 station(s) will be only available if the user has the necessary privileges to use audio devices by having been added as a member of the "**Audio**" group. Normally, when Ubuntu creates a new user, he/she is automatically added to the audio group.

You can manually add users to the "**Audio**" group using the following terminal console command:

"sudo adduser <username> audio"

For example: sudo adduser user2 audio

When a new user in the **"Audio"** group logs in for the first time, the audio volume will be set to MUTED. To un-mute the audio, left click on the speaker symbol located on the upper taskbar, and select a new default volume level.



Changing Video Resolution on the Sessions

To change the monitor resolution on the stations, it necessary to select the icon identified in the screen shot below to access the console's video mode window. This icon is available when "Stations", "X550(X350) Card" or any of the stations (1-5 or 1-3) are selected within the console. All sessions on a single card are set to the same resolution and a host reboot is necessary for a resolution change to take effect. (Please note that the host console resolution is running on an independent video card and can be changed separately.)

	\frown					
N	rSpace - Adn	ninistration	Console - v3.0	.1138	_ _ _ _	
i G O I G D C						
- NComputing system	De Hop Resolution				the second	
Stations	💛 Statio	ns		î	omputing 🐃	
- X550 Clard 1		and the second				
🗊 Station 1		100	Sec. 1			
🔟 Station 2	Station	User Name	Session Device	Connection status		
- 🚺 Station 3	Card 1 Station 5	u4	X550	Running 13-04-2009 11:25		
- Station 4	Card 1 Station 4	u5	X550	Flunning 13-04-2009 11:25		
Station 5	Card 1 Station 3	u3 u9	X550 X550	Hunning 13-04-2009 11:25 Running 13-04-2009 11:25		
- Canon S	Card 1 Station 1	u2 u1	X550	Flunning 13-04-2009 11:25	Sec. 1	
Sadal Number				4	Contraction of the State	
USB assignment	8				Contraction of the second	
ale o ob assignment.						and the second
						interna i
						stem
						V
11						

Figure 18 – Identiying console card resolution icon

The Video mode resolution can be selected as shown below.

1	Video Mode Resolution for Card 1	×
Card Settir	ngs	
Please no resolution Non saved	te, all Stations of the selected card will use the same . To change the resolution affected Sessions will be restarted. d user data will be lost !	
	1024 x 768 HiColor	
	Cancel Apply	

Figure 19 – Current card resolution settting

4	Video Mode Resolution for Card 1	×
Card Settings		
Please note, all Sta resolution. To char Non saved user da	ations of the selected card will use the same nge the resolution affected Sessions will be rest ata will be lost !	arted.
	800 x 600 HiColor	
	1024 x 768 HiColor	
	1280 x 720 HiColor	
	1280 x 800 HiColor	
	1280 x 1024 HiColor	Apply
	1440 x 900 HiColor	
	1360 x 768 HiColor	· · · · · · · · · · · · · · · · · · ·

Figure 20 – Changing PCI card resolution

The X-series Admin Console for Linux

The Ncomputing System console provides current data on the Stations (and/or sessions), the X-series card, license status, PCI card serial number, and USB assignment. The product information screen shown below provides vSpace version information and contact information.

M	vSpace - Administration Console - v3.0.1138
NComputing system Stations Station 1 Station 2 Station 4 Station 5 Station 5 Leonse Information Setal Numbers Station 5	Product Information Product Information Product Name: vSpace Build Date: 20094/7 Version: 3.0.1138 Vendor Name: NComputing Inc. HomePage: http://www.ncomputing.com Technical Support: http://www.ncomputing.com/incomputing/supportFoverview.php

Figure 21 – Product Information screen

Station information includes the station number, User Name for the for individuals logged onto each Session, and the time each session was started. A session time resets to the current time if you use the console to stop a session and then start it again (see page 18 for how to stop/start sessions from the console).

N	vSpace - Adm	inistration (Console - v3.0	.1138	_ = X
000					
• M NComputing system	Desktop Resolution				
Stations	Statio	าร			omputina 🐃
		-			
🚺 Station 1					
- T Station 2	Station	User Name	Session Device	Connection status	
Station 3	Card 1 Station 5	u4	X550	Running 13-04-2009 11:25	
	Card 1 Station 4	u5	X550	Running 13-04-2009 11:25	
📕 Station 4	Clard 1 Station 3	ພ3	X550	Running 13-04-2009 11:25	
- 🗊 Station 5	Card 1 Station 2	u2	X550	Running 13-04-2009 11:25	
- 🕵 License Information	Card 1 Station 1	ut	X550	Flunning 13-04-2009 11:25	
- A Serial Numbers	8				
	1				
4					

Figure 22 – Station information screen

X-series PCI card device information includes a hardware serial number (Device Version) and the software serial number (Serial Number).

N	vSpace - Administration Console - v3.0.1138	_ <u>-</u> X
:000	0	
NComputing system Stations Station 1 Station 2	X-Series Device	.N€omputing ™
Station 2 Station 3 Station 5 License Information Serial Numbers USB assignment	Device Name: X550 Device Version: K9192 Device Status: Operating Serial Number: 10012935	

Figure 23 – X-series PCI card information screen

The Session Information screen provides data about an individual user session. The display name represents the x11 window manager display number, and the station ID is the Ncomputing internal station identifier for this session. Also, selected sessions can be refreshed (circular arrow), started (right arrow) and stopped (square) from the menu bar. If you select an X-series card in the left-hand pane, and click the stop icon, all sessions on that card will be stopped (an administrator information box will pop up on the console session for each session and allows the administrator to verify they want all applications running on that session to be stopped. Then the console actually stops that station's session.)



Figure 24 – Session information - Identifying "Console Refresh", "Session Stop", and "Session Start" icons

The License information lefthand-pane icon displays user entered contact information for the registered user.



Figure 25 – License Information screen

The Serial Numbers screen shows the X-series PCI card's internal serial number, the card type, and the current registration status.



Figure 26 – Serial Numbers screen

USB Port Assignment

"Assigning" USB devices (i.e., associating them with a particular station or access device), is begun by clicking on the "**USB assignment**" icon in the left-hand-pane of the NComputing vSpace Administration Console. This function permits assigning a host USB port (or USB devices attached to a host port) to limit accessibility to specific virtual desktop sessions, all sessions associated with X-series access devices, or to the host console session.

In the current implementation, users can manage USB devices that mount automatically through the Gnome and KDE Volume Manager (USB memory stick, HDD, etc.).

Please note that assignment cannot be changed for devices previously present and mounted with a different user's rights. Therefore, to ensure your USB port assignment configuration works as intended, please disconnect all non-essential USB devices and re-boot the machine BEFORE attempting to assign USB ports to X-series device connected stations.

After the reboot, please Login as user "root" to define the USB port assignments.

To prevent un-authorized access by other non-root system users, some multi-user Ubuntu deployments may need to require USB removable storage to be mounted with specific security attributes. The following options are available:

• Assign the device just to the Host console:

Only the console session can see or have any access to the USB device when it gets attached to the system.

• Assign the device as Shared read-write:

All sessions/stations will see the device when it is plugged in; all sessions are allowed to read/write associated contents.

• Assign it as Shared read-only:

All sessions/stations can read from the storage device, but they cannot write or delete files. Example: when a teacher wants to share pictures or media with students logged on other

stations but does not want them to alter the storage device files in any way.

• Assign it to one particular Station associated with a specific X-series PCI card:

With this attribute, the removable USB storage device will only be seen at that particular station, and that station is the only one with permissions to read/write/delete files on the USB device.

KIRS X550 Card 1		nen	-	N Computi	ing -
- 🗾 Station 1 - 🚺 Station 2 Synts pertr	Class	Product	Manufacturer	Station	1.
Statun 3 rast	u. USB Hub	UHCI Host Co	Linux 2.6.24-2	V Default	
days)	8L	Not connected		V Detault	
- 🚺 Station 4 /sys/b	M.S	Not connected		V Default	
Station 5 - + /sys.b	USB Hub	UHCI Host Co.	Linux 2.6.24-2	V Detault	-
case information (syste	Mar.	Not connected		V Default	-
/sys/b	al	Not connected		🖌 Default	
Numbers -4- /sys/b	USB Hub	UHCI Host Co	Linux 2.6.24-2	V Default	
signment insyste	<u>M</u>	Not connected		V Default	1
(sys/b	W-+	Not connected		V Default	
10	USB Hab	UHCI Host Co	Linux 2.6.24-2	V Default	
(sys/b)	M.L.	Not connected		V Default	
(stap	Lie cupo assino	Not connected		V Default	
🕀 👐 (sysib	u USB Hub	UHCI Host Co	Linux 2.6.24-2_	V Default	
- /sys/b	Maria .	Not connected		🖌 Default	
- /sys/b	M	Not connected		V Default	
⊕ ⊶e /eysb	USB Hob	UHCI Host Co	Linux 2.6.24-2	V Detnuit	
(sys/b	W	Not connected		🖌 Default	
		Billing was mine marked		A set IT address of the	
(a) 5 (b)	Press of the second	vebr connected		A. Denny	2.0

Figure 27 – USB assignment screen

To identify the Linux port you wish to assign to a particular Access Device or Station, insert a USB memory device into the physical USB port you wish to use for that station and click the Refresh button on the USB assignment toolbar. (The refresh button is denoted with a curved arrow, and the button is located to the left of the toolbar's Question Mark button.) Clicking "Refresh" updates the USB connectivity information list and causes the newly plugged-in device to appear in the list.

➢ Double click on the "✓ Default" item corresponding to the USB port you've just identified, and select the "Session" to which you wish to assign the port.

Note: The definition for the "✓ Default" setting for this Ubuntu installation is stored in the "vspace.com" file located at:

After all specific USB assignments have been made using the NComputing Administration Console, the device specific assignments are then stored in the "usb.com" file located at:

/etc/ncomputing/usb.com

USB 1.1 devices and USB 2.0 devices show up in the assignment screen under two different device types. USB 1.1 devices will be shown under a "UHCI Controller" designation in the

Product column, and USB 2.0 devices show with the "EHCI Controller" designation in that same Product column. To ensure a device plugged-in to a physical USB port gets assigned to the correct session/station – regardless of whether the device is USB 1.1 or USB 2.0 – the physical port must be logically "double identified" using both a USB 1.1 device and a USB 2.0 device. The physical port must be logically "double assigned" under both the "UHCI" and the "EHCI" controller designations.

	VSpace - Ad	uninistration	Consolu - VSc9	00088	1313	30
M NComputing system	USB	assignr	nent	-	#Computing	r
Staton 2	Systs path	Class	Product	Manufacturer	Station	4
Station 3 Station 4 Station 5 License Information Serial Numbers CISB assignment	 	USB Hub USB Hub USB Hub USB Hub USB Hub USB Hub	UHCI Host Co. Not connected Not connected UHCI Host Co. Not connected UHCI Host Co.	Unus 2624-2 Unus 2624-2 Unus 2624-2 Unus 2624-2 Unus 2624-2 Unus 2624-2 Unus 2624-2		
	V ADDAY	Cancel	Detaut	assignment :	None (not mounted)	¢]

Figure 28 – Port Assignment to Station



Figure 29 – Identifying the Station number (X350)

> After selecting the desired station number, click "Apply" to save the new setting.

If you attach a USB hub to a USB port on your host computer, you can assign the entire USB hub to a particular Station, or you can assign its ports to different Stations on an individual basis.

After a USB port is assigned to a Station, and the configuration is saved, whenever a USB

storage device is plugged into that port, the Gnome or KDE Volume Manager (storage "volume" – not audio "volume") will show ONLY on the assigned Session's (i.e., Station's) screen and it will not be visible on any other user's screen.



Figure 30 – USB Storage volume icon shown on Desktop

Uninstalling vSpace

Uninstalling NComputing's vSpace software can be done using the standard Ubuntu tools. The Synaptic Package Manager will remove the software. vSpace software is identified with the name "xseries".

\$	Synaptic Package Manager	_ = >
<u>F</u> ile <u>E</u> dit <u>P</u> ackage <u>S</u> et	. ngs <u>H</u> elp	
C 💭 Re oad Mark Al Ups	grades Apply Froperties Search	
All	S Package Installed Version	Latest Version Description
XS	xsensors	C.50-luourtu2 A harcware health info
	xseries 3.0.1146.betaM	3.0.1146.betaM NComputing Linux Terr
	🗆 🚭 xserver-xephyr	2:1.4.1~git2008013 nested X server
	xserver xgl	1:1.1.95.1git2008: GL based X server
		•
	No package is selected.	
Sections		
Status		
Urigin		
Custom Filters		
S <u>e</u> arch Results		
I packages sted. III /	instal ed. 0 broken. 0 to install/upgrade. 1 to remove: 338	/ kB will be freed

Figure 31 – Uninstalling vSpace for Linux