L-Series
Access Devices
with vSpace™ for Linux

Ubuntu 8.10 Installation Guide

Updated: February 2, 2010

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Please read the disclaimer located at the end of this document.

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Overview

NOTE: The beta program for L-series vSpace for Linux supported OpenSUSE 10.2, but this released version supports Ubuntu 8.10 – not OpenSUSE.

This document is a supplement to the L-series User Guide.

For basic common information such as safety and regulatory compliance, product overview and other features of the L-series access devices please see the L-series User Guide.

This supplement provides the installation process for the NComputing L-series vSpace Software for Linux for the Ubuntu 8.10 distribution and includes instructions for:
- o vSpace Software installation for L-series
- o Instructions for On-line and off-line registration
- o Configuring audio
- o USB to user station assignment
- o Console functionality
- o Uninstall of the Linux vSpace software

This document assumes the user will be starting from a clean install of Ubuntu 8.10

Prerequisites

The following items are needed to begin the installation process:

- Ubuntu 8.10 installation image (It's critical that only a clean install be used, modified images may not operate correctly)
- Current NComputing L-series vSpace Software Software (Lseries_3.0.2511_i386.deb or newer) and readme document
- Sound card (or device) on host system that's supported by Ubuntu 8.10 and has been enabled
- Internet Connection

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

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

Installing Ubuntu 8.10

You can locate and download Ubuntu 8.10 from: http://releases.ubuntu.com/8.10/ 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 released 8.10 version.

1. Download Desktop Edition; Ubuntu 8.10 install CD image
2. Create Ubuntu 8.10 System CD-R
3. Insert Ubuntu 8.10 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
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 initial system install of Ubuntu 8.10 are recognized to have administrative rights.

*********   Even if prompted following this login, _DO NOT INSTALL Ubuntu UPDATES_   *********

12. Now, copy the L-series Ubuntu 8.10 NComputing vSpace installation file to the desktop.

    Lseries_3.0.2511_i386.deb (*or the most recent version of L-series vSpace for Ubuntu*)

NComputing

Installing the L-series vSpace Software Software Package

13. Click the "Places" pull-down on the Ubuntu Desktop Menu to locate and open the folder containing the Ubuntu 8.10 vSpace software installation file:

Example file = **Lseries_3.0.2511_i386.deb**

Figure 1 – File Browser Window
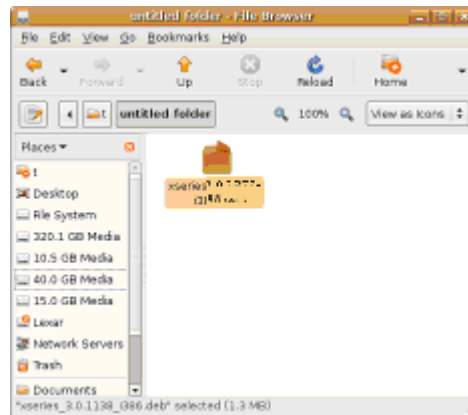
14. Double-click on the installation file name and the package installer will open and start to install the package.   If prompted, enter password of user with system administrative rights, then click the "Install Package" button, and installation begins.
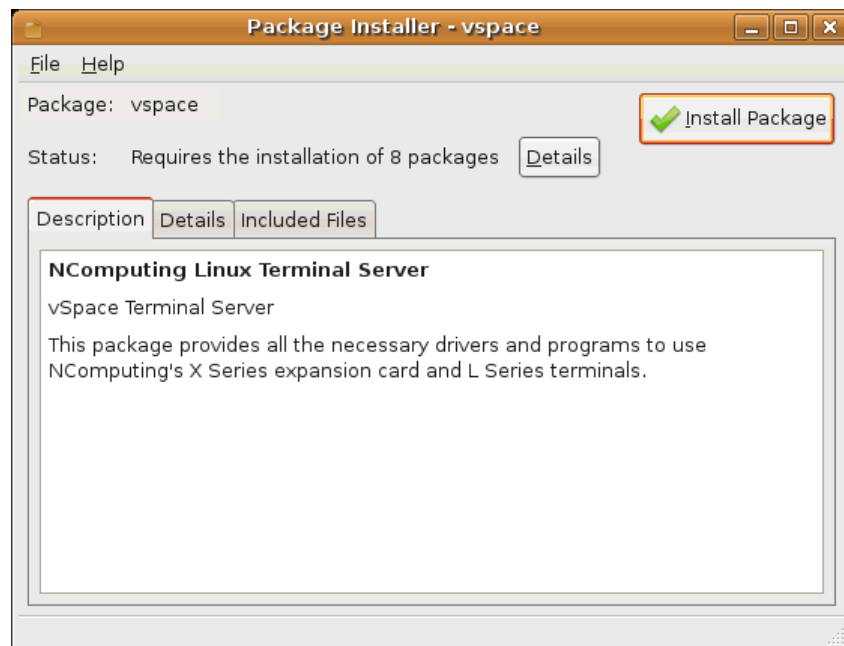

Figure 2 – L-series Package Installer Window

You can track the installation progress via the package install status window.
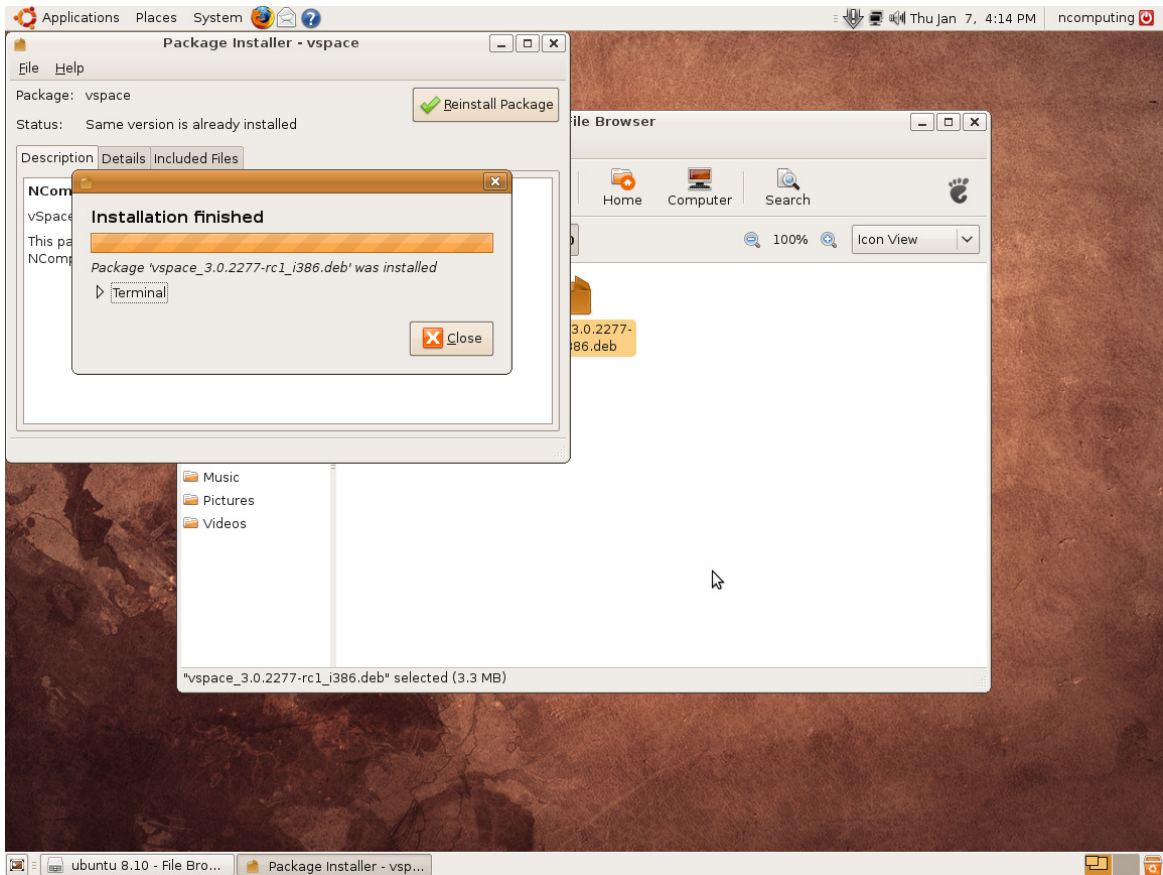
Figure 3 – L-series Package Install Status Window

15. When prompted, click the check box, and Accept the: "vSpace End User License Agreement" (EULA).
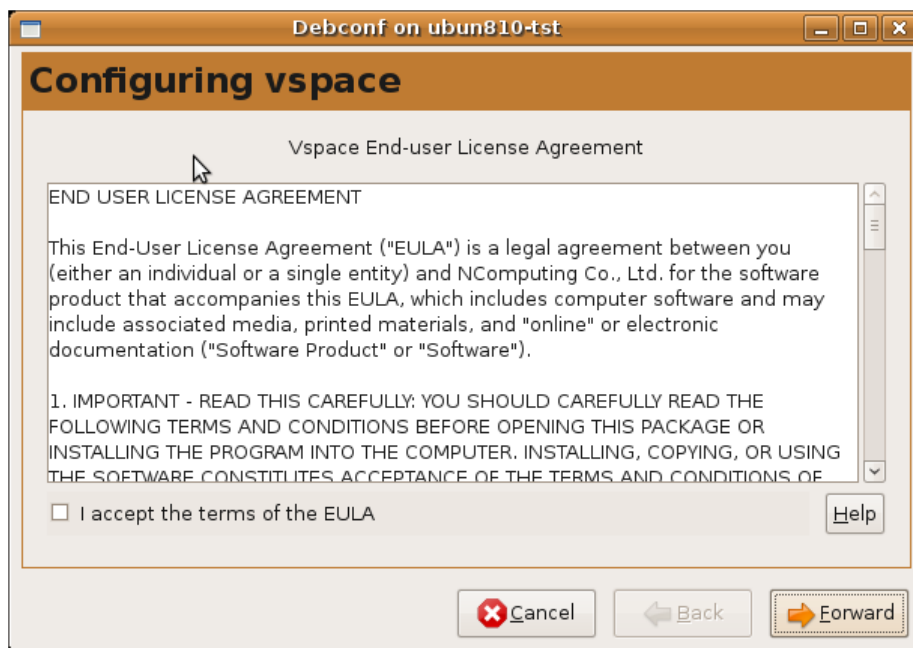
Figure 4 – End user license agreement

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16. Then when prompted, click the check box, and Accept the "vSpace Terms of use Statement":
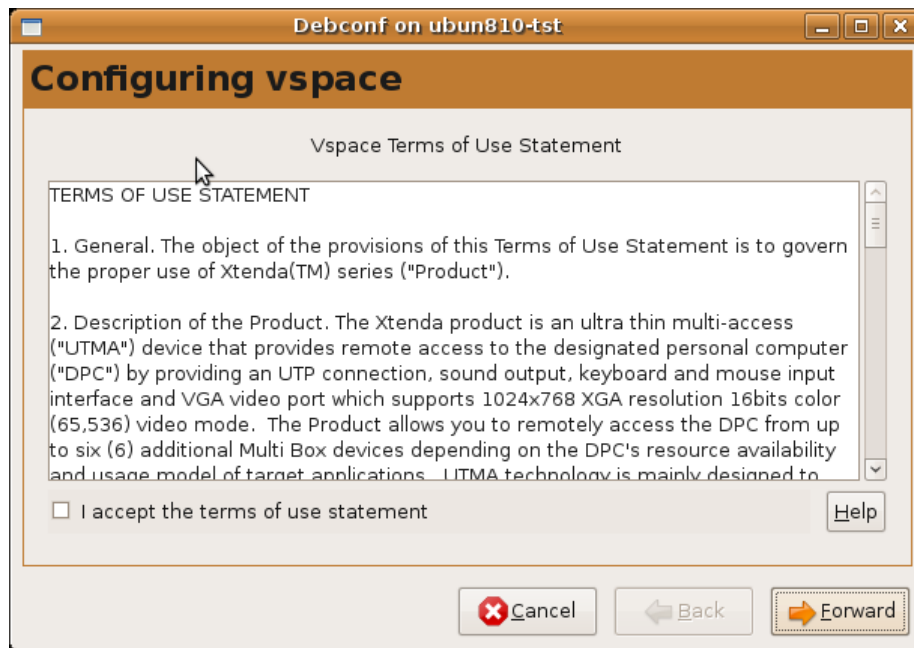
Figure 5 – Terms of Use Statement

:
If the "**vpace post-configuration: Additional steps required** " message window appears, simply click the "Forward" button to continue.
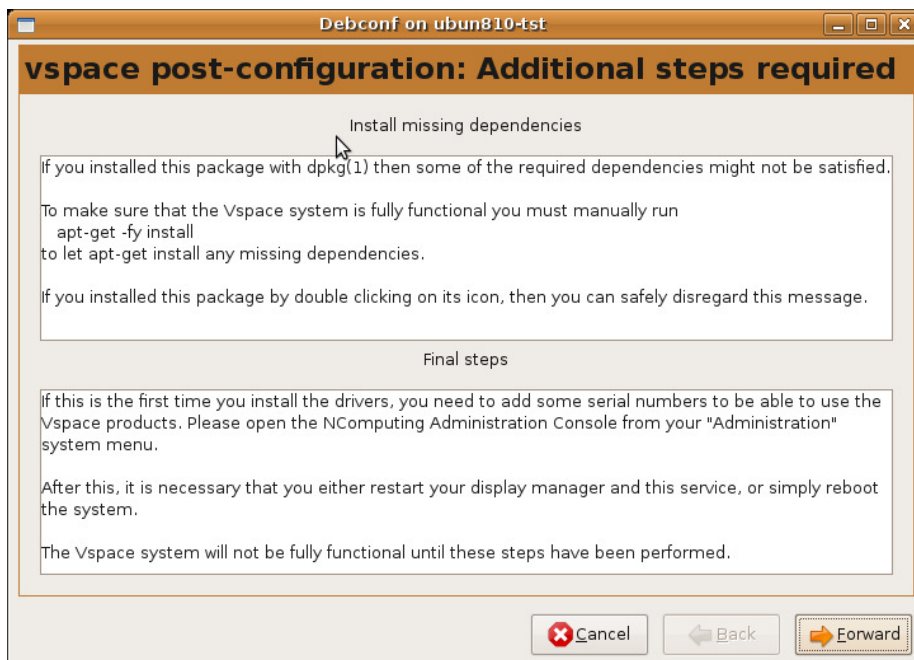
Figure 6 – vSpace Post-Configuration Message

After the L-series vSpace software installation completes, close any window(s) and reboot the system.   Following system reboot, the host desktop will display the Ubuntu login screen.

Figure 7 – Installation Finished Message
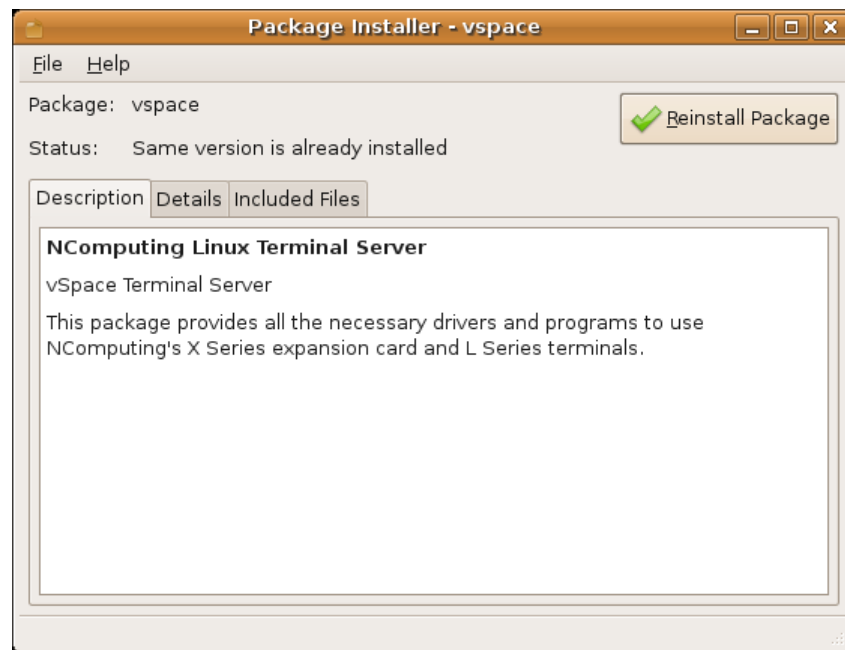
Figure 8 – Package Installer window after vspace installation completes

Once the installation is complete, dismiss the "Package Installer" window and restart the system.

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Using the vSpace Administration Console Window
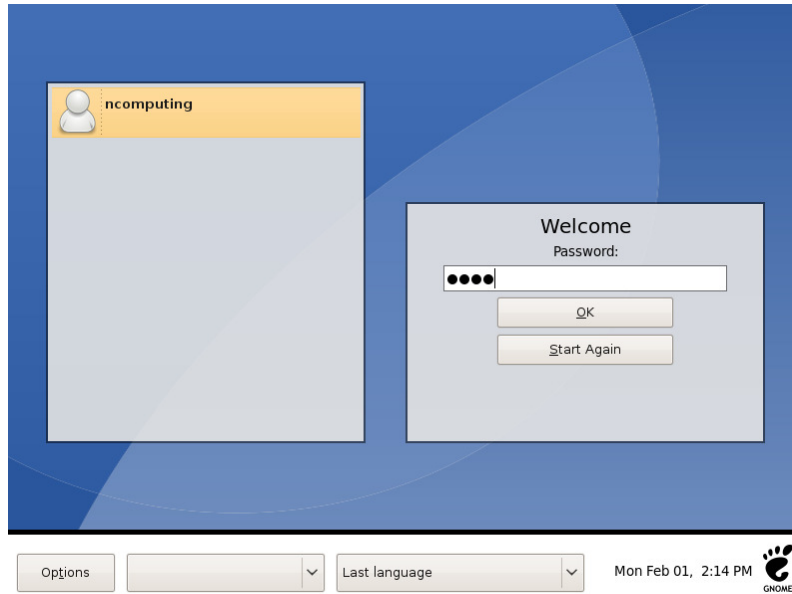
Figure 9 – Ubuntu login screen following vSpace install and system reboot

After reboot, type-in or click-on a username with administrative rights and enter its password into the login screen, to bring up the Ubuntu Desktop.

Then on the menu taskbar, click on:
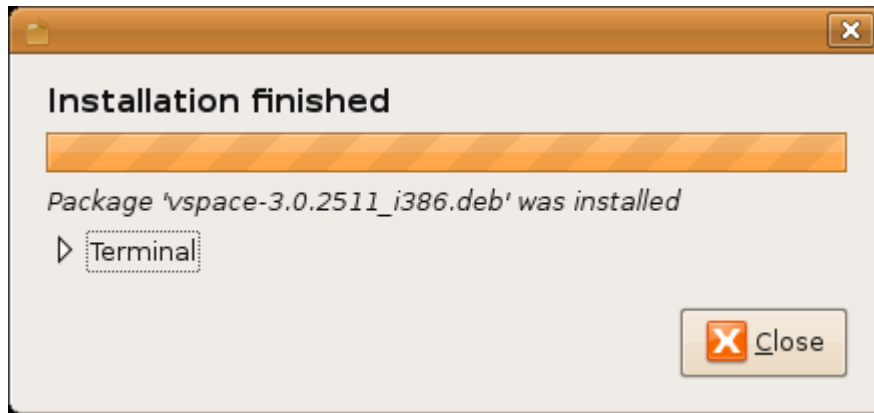
"System > Administration > NComputing Console"
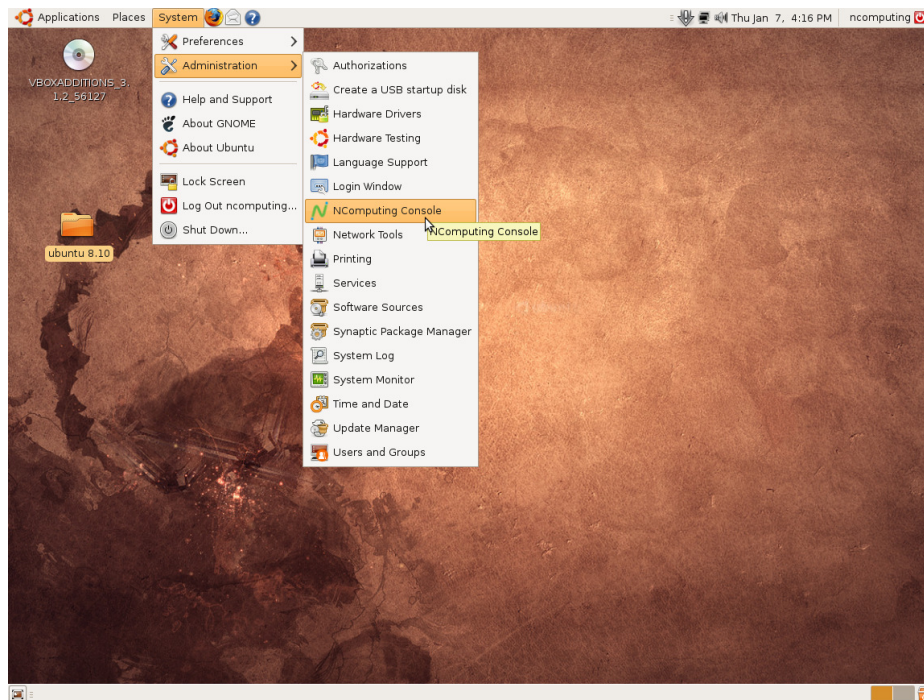
Figure 10 – Launch the vSpace Administration Console

This starts the vSpace Administration Console launch, and then you will be required to enter the "administration rights" password – to verify that you have appropriate permissions to modify the system configuration.
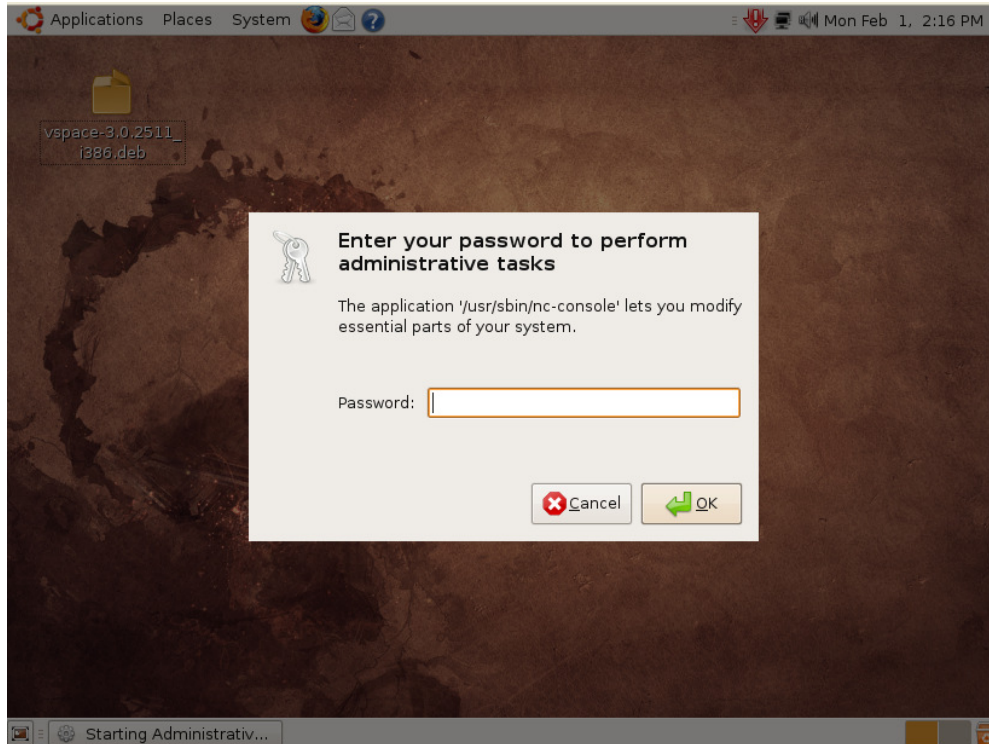
Figure 11 – Verify that you have rights to modify system configuration

When vSpace is initially installed, it starts an automatic a "30-day Trial Period." During this trial period, the user has complete access to all features of the software to allow evaluation of the product. To use the product beyond this **"30 day trial period"**, the software must be registered.

Also during the trial period, an L-series connected user session will only operate for a 1 hour period. At the end of the hour, the session will be terminated. A new session can be started by the user logging in again from their L-series access device.
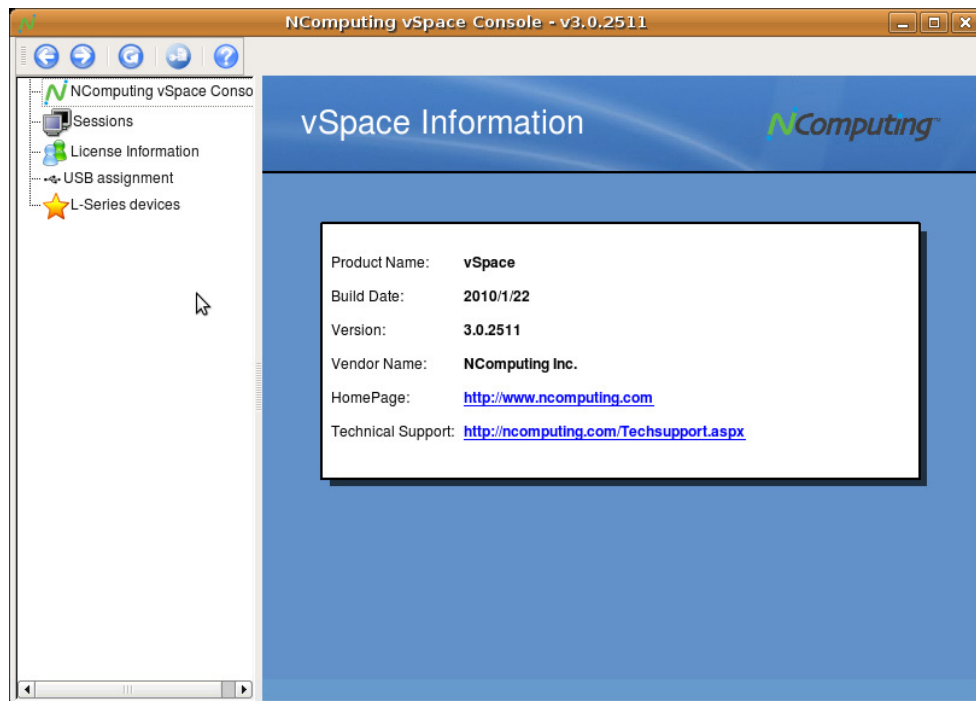
Figure 12 – Administration Console window

Registering Your Product

An Internet connection is required for on-line registration.

To start the registration process for your L-series access devices and the vSpace for Linux on this system, click on the "Manage Registration" icon in the upper left-hand side of the admin console window. The vSpace Registration Wizard will then walk you through the product registration process.

Figure 13 – Launching the Registration Wizard

Figure 14 – L-series Registration Wizard initial screen

➢ Click "Next" to proceed

The wizard presents the "End User License Agreement" window, and you must click on the "I agree" box to proceed to the next step.
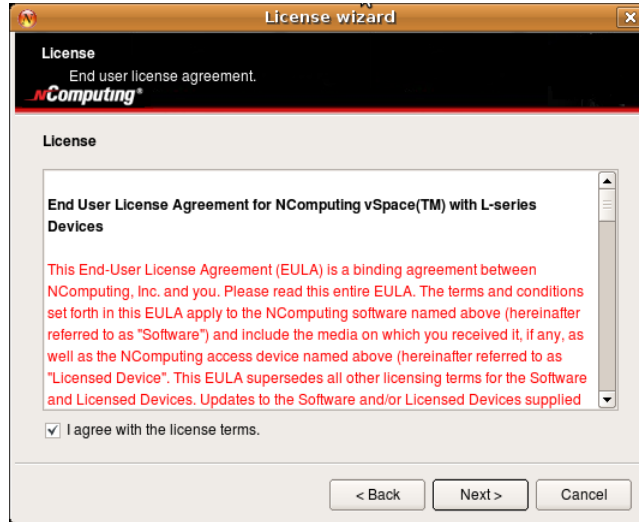
Figure 15 – vSpace End User License Agreement Screen

> ➢ Check the "I agree" box – then click "<u>N</u>ext" to proceed

The wizard then takes you to the "Type of Registration" screen.
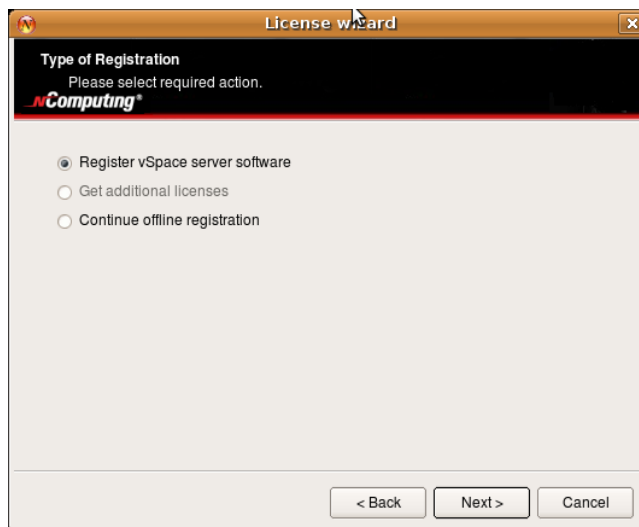
Figure 16 – Type of Registration Screen

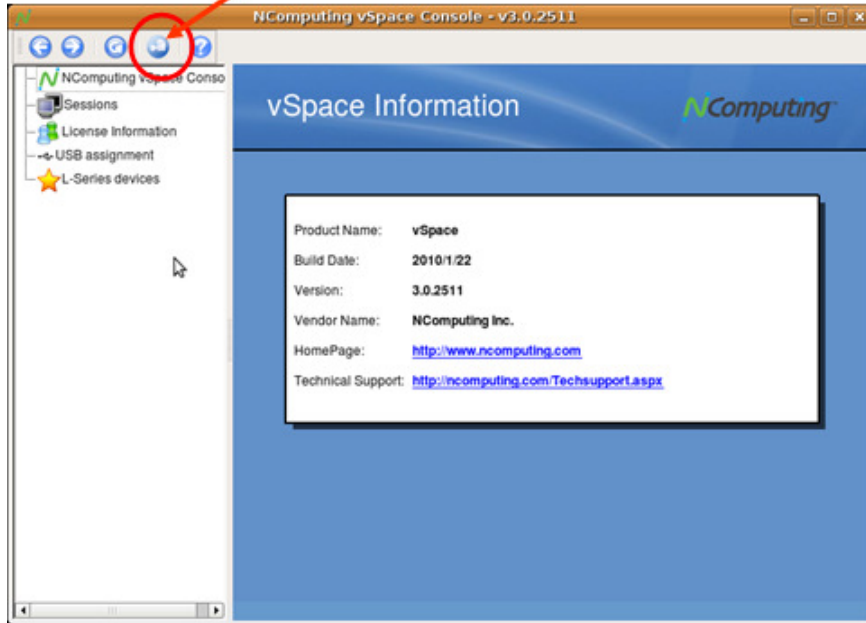Regardless of whether you want to register your vSpace software and L-series access devices online or off-line, make sure the "Register vSpace server software" radio button is selected, and click "Next."

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

At the "Customer Data" screen, if the data fields are not already populated, enter the registered user's relevant information. Each field in this window must be filled in. (Fields still needing data entry are highlighted in light red.)
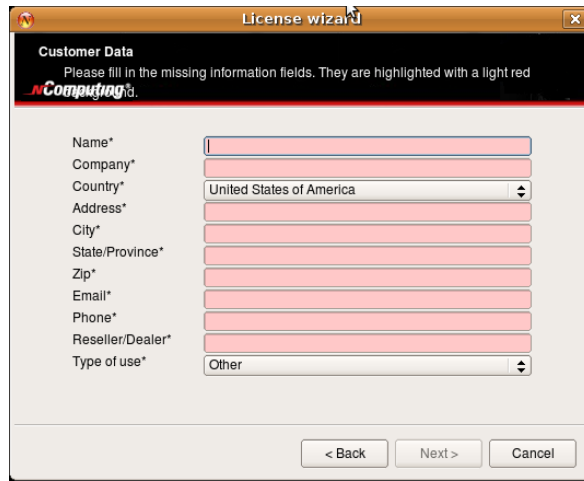
Figure 17 – Registration Customer Data Window – w/ no data entered

Once all customer data has been entered, click on the "Next" button.
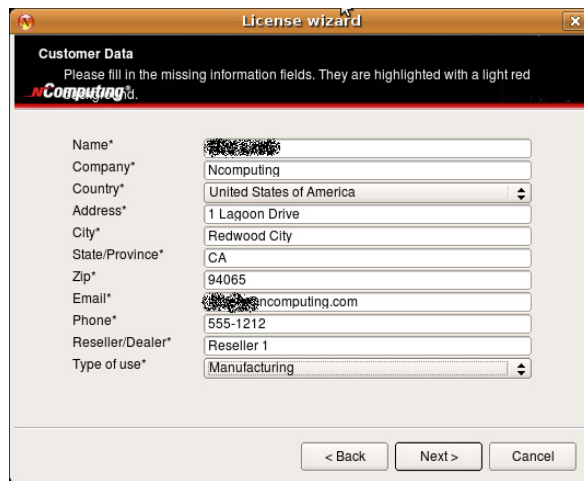
Figure 18 – Registration Customer Data Window – with data filled in

The registration wizard then shows a list of all registered and unregistered L-series access devices that currently have virtual desktop connections to this vSpace host. You cannot select which devices will be registered – all unregistered devices shown in this list will be registered

Figure 19 – List of Connected Devices Screen

Online Registration

Online Registration

In the case of Online Registration, follow the instructions below. Otherwise skip to the section titled "Offline Registration".

If you want to register your vSpace software and L-series access devices online, make sure the "Register online, using your internet connection" radio button is selected, and click "Next."

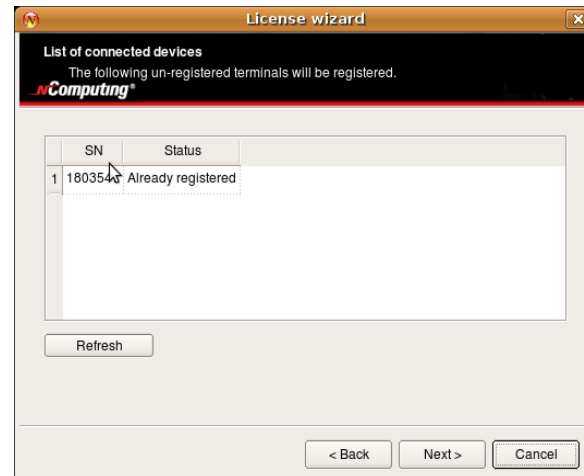*Click on the "Use tunnel connection through local HTTPS proxy server" box if you normally access the internet at your location through a proxy server. Clicking the box enables you to fill in the proxy server IP address and the port number to use.*
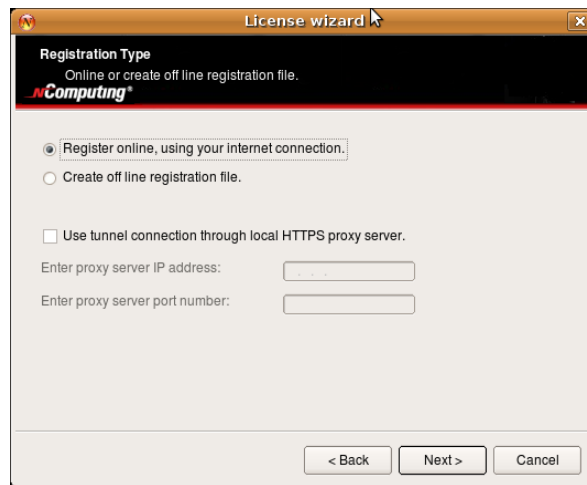
Figure 20 – Select Registration Type Screen

Before the registration wizard communicates with the registration server, you will get the following "Summary" screen showing all user information that will be registered with the vSpace software. Also, any connected but unregistered L-series access devices will be listed for registration. .
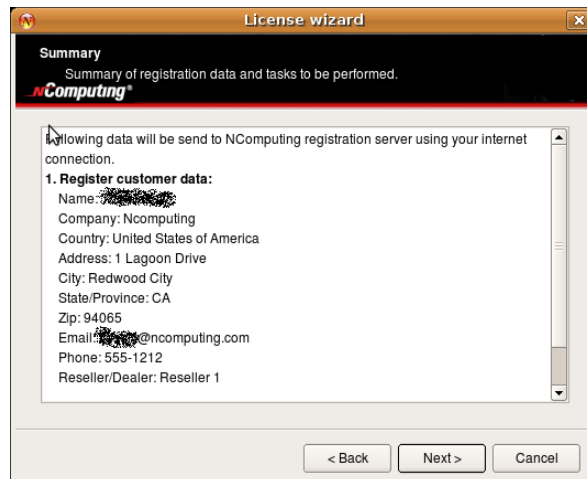
If the data is correct, click on the "Next" button or click "Back" if you wish to change any of the information

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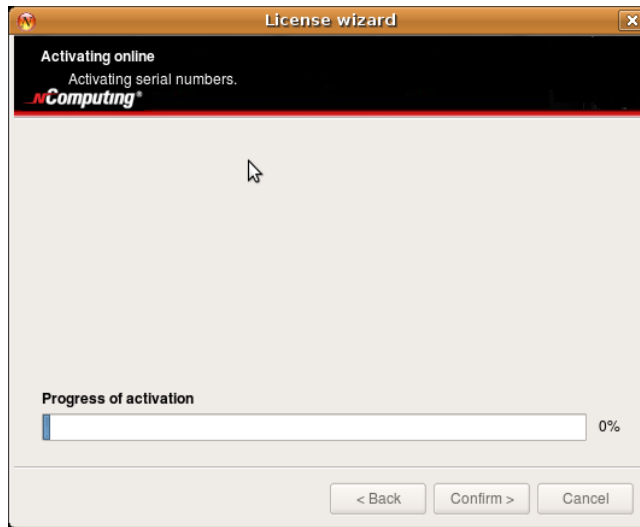
Figure 21 – Registration Progress Window

Clicking "Next" tells the registration wizard to go ahead and contact the online registration server. Then the "Progress of activation" status screen is displayed.

Once the installation wizard completes its communications with the online registration server, the "registration results" window is displayed. If the registration was successful, you'll get "Registered customer data and Software and device license information" – the "Trial Period" status is removed from the vSpace software, and it is replaced with a standard software license. (License number provided on this screen.)

Be sure to click the check box for the "Register future L-series devices in the background" option, if you want vSpace to automatically register any unregistered L-series access devices that connect to this system in the future. Use of this "background registration" feature requires standard internet connectivity.
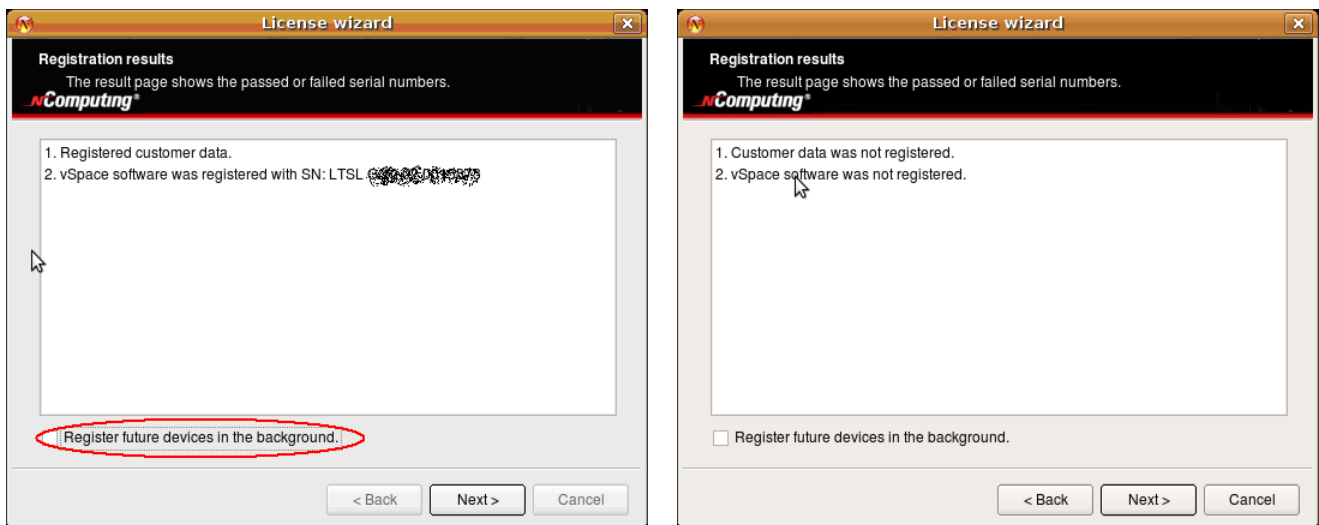
Figure 22 – Registration Results Screen

If you can get the "Customer data was not registered" message in the Registration Results screen, then the registration process failed, and the vSpace software stays in "Trial Mode."

Clicking "Next" on the Registration Results screen takes you to the Activation Process Complete Screen.

Figure 23 – Activation process complete screen

Offline Registration

In the case of Offline Registration, follow the instructions below. If you have completed the online registration section, skip to "Using the access device".

If you do not have standard internet connectivity, you can use standard email to register your vSpace software and L-series access devices.

To use offline registration, select the "Create off line registration file" option, and click "Next."
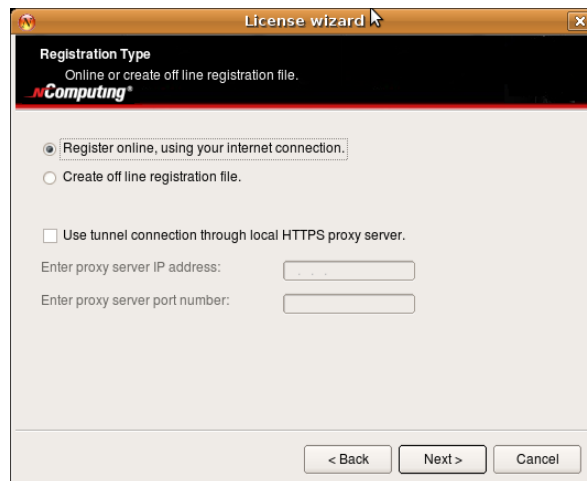
Figure 24 – Select registration Type Screen
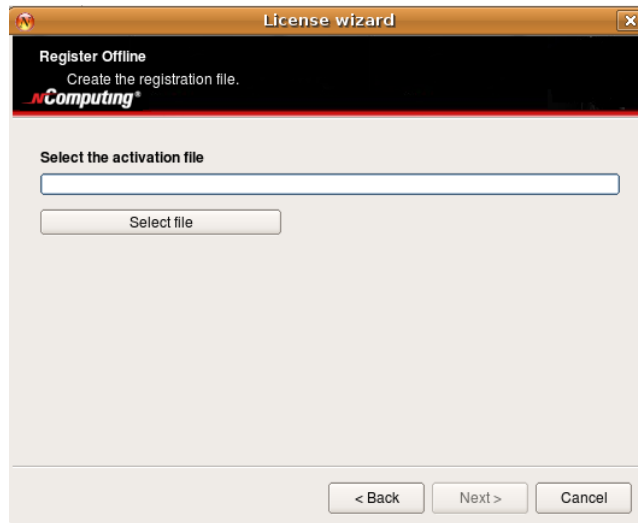
Figure 25 – Select where to store offline activation file

Click on the "Select file" button to define where you wish to store the activation file that will then be emailed to registration@ncomputing.com . This brings up the "Save File" dialog box and you can select the location for storing the file, and you can change the file name as well – but the filetype must not be changed from "txt"
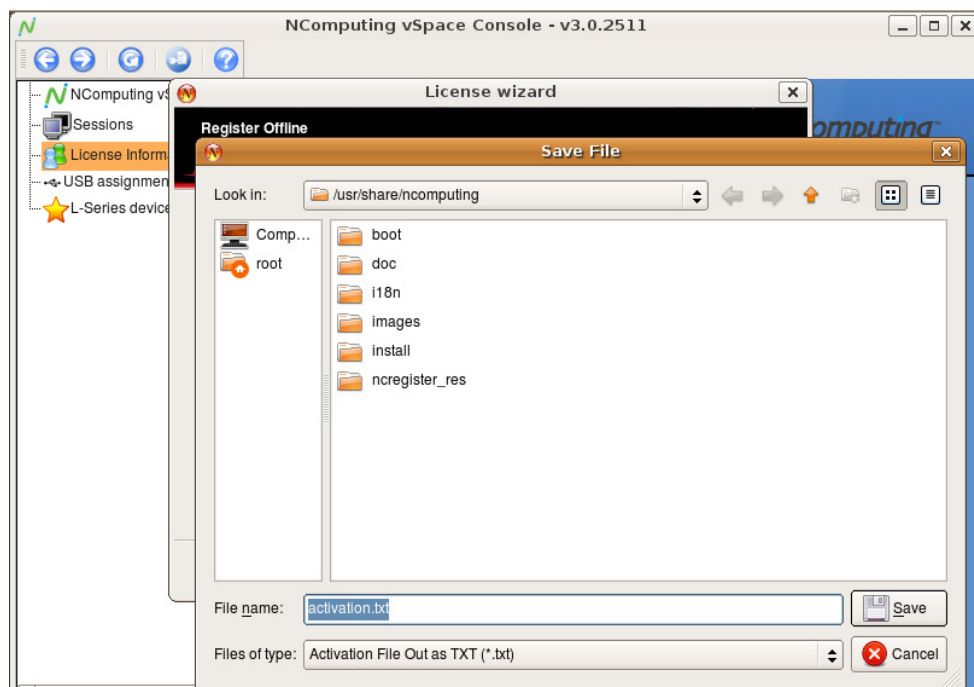
Figure 26 – Offline registration "Save File" dialog box

Once you've selected where to save the file and the filename, click the "Save" button, and the "Register Offline – Create the registration file" screen is again displayed showing the fully qualified filename you've selected.
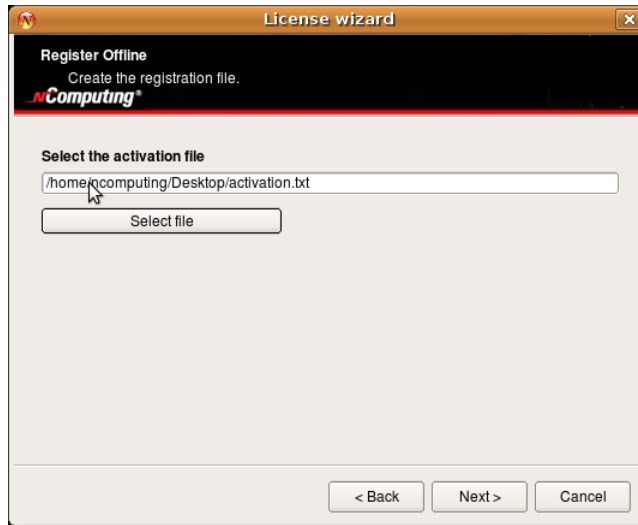
Figure 27 – Register Offline file save screen

Now click the"Next" button to create and save the registration file.

Figure 28 – Registration Summary screen

The registration summary information is then displayed. Click "Next" to continue.
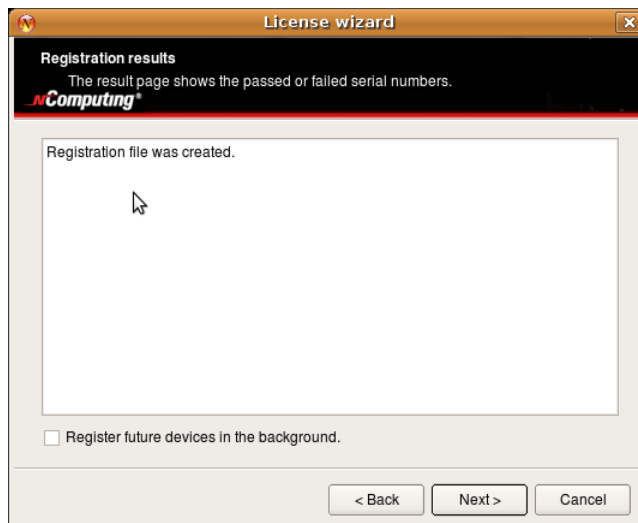
Figure 29 – Registration results screen showing "offline registration file created"

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Now that the "Offline Registration file" has been created, email that file to registration@ncomputing.com

Once you have recieved a returned license file (filetype = .lic) from Ncomputing's automated offline email registration system, save the file onto the Linux host, launch the NComputing Admin Console, and once again launch the Registratin Wizard.
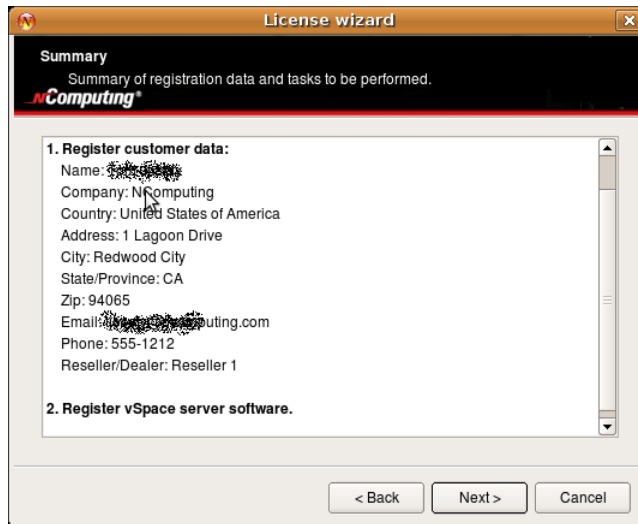
Click "Next" until you again reach to the "Type of Registration" screen.
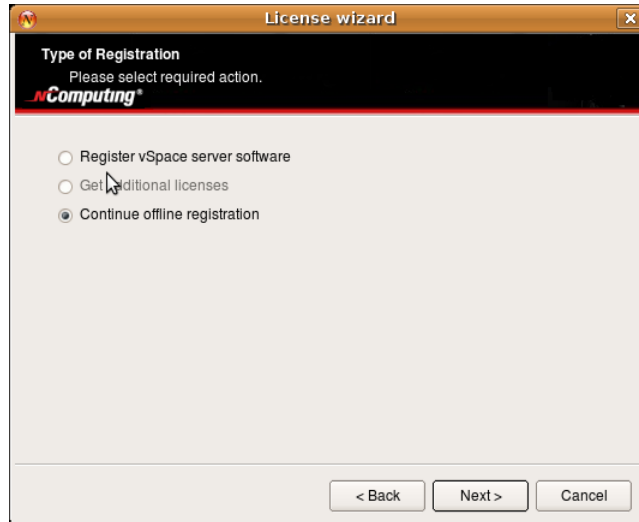
Figure 30 – Type of Registraion screen

To complete the offline registration process, this time select the "Continue offline registration" radio button and click "Next."
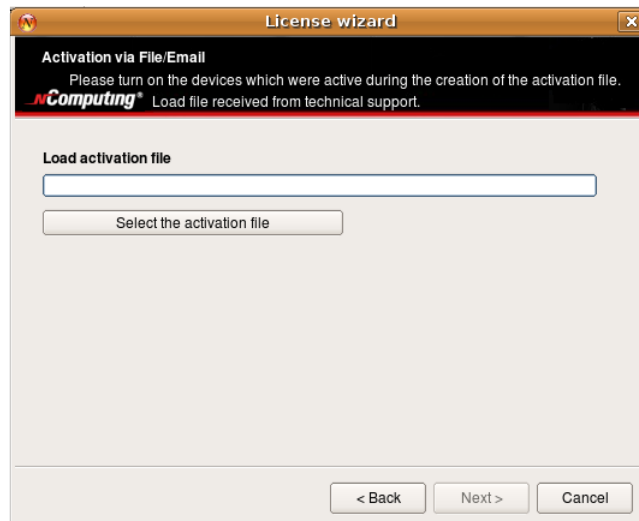
Figure 31 – Load Activation File screen

Now, you're presented with a screen where you enter the location of the license file that was returned to you by email.

Click on the "Select the activation file" button to bring up a dialog box to allow naviating to the license file location.
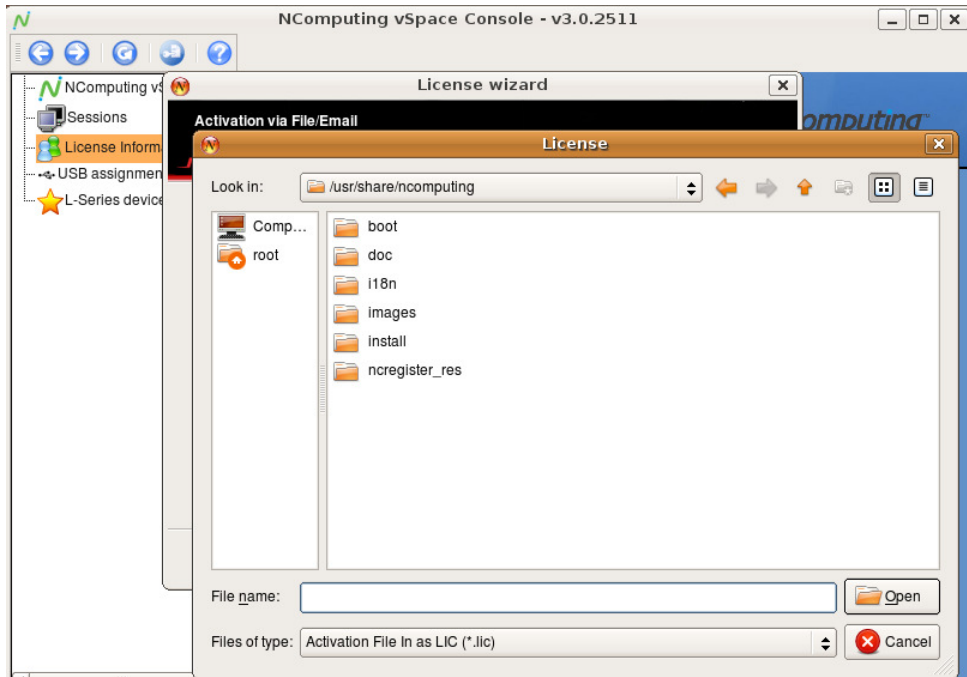
Figure 32 – Navigation screen to select returned license file

Use this dialog screen to located the license file, and click "Open."

Then the "Load Activation File" screen is redisplayed showing the fully qualified licence filename.
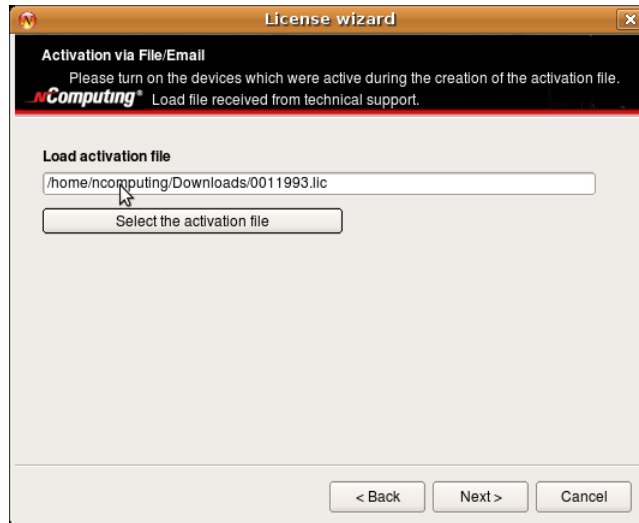
Figure 33 – Load Activation File screen after locating license file

Now click "Next" to complete the activation process.
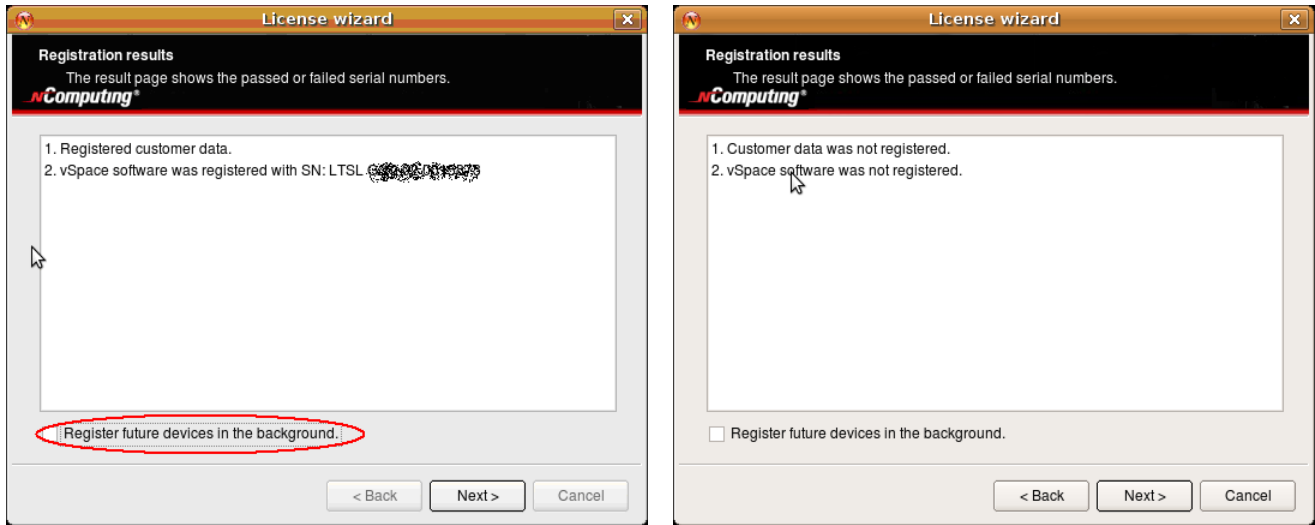
Figure 34 – Offline registration results screen – showing successful and unsuccessful registration examples

You can click the check box for the "Register future L-series devices in the background," but it will have no effect because you have used offline registration. The "background registration" feature requires an active standard internet connection.

Click on "Next," to complete the offline registration process.
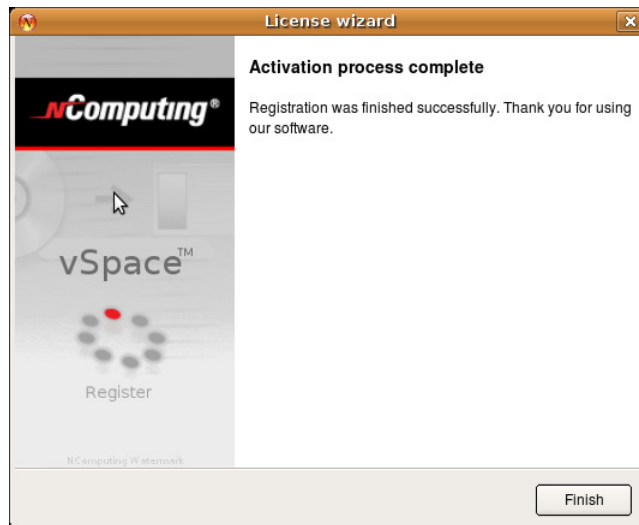
Figure 35 – Activation Precess Complete screen

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 a 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 L-series access device with network access to this system.

The L-series Admin Console for Linux

The Ncomputing System console provides current data on the L-series sessions and USB assignment. The product information screen shown below provides vSpace version information and contact information.

Figure 36 – Product Information screen

USB Port Assignment

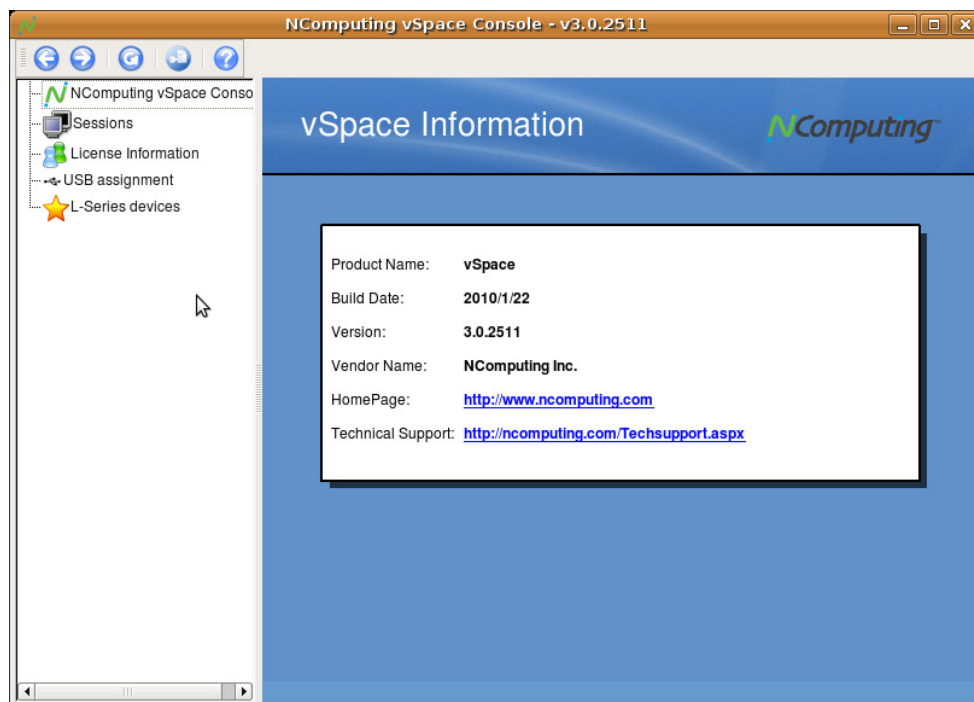"Assigning" USB devices (i.e., associating them with a particular station or access device), is started by clicking on the "**USB assignment**" icon in the left-hand-pane of the NComputing vSpace Administration Console. This function permits assigning a host USB port (or USB devices attached to a host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

In the current implementation, users can manage USB devices that mount automatically through the Gnome 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 L-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:
  - o 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:
  - o 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:
  - o 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 do not want them to alter the storage device files in any way.
- Assign it to one particular Station associated with a specific L-series station for the duration of the current session:
  - o 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.
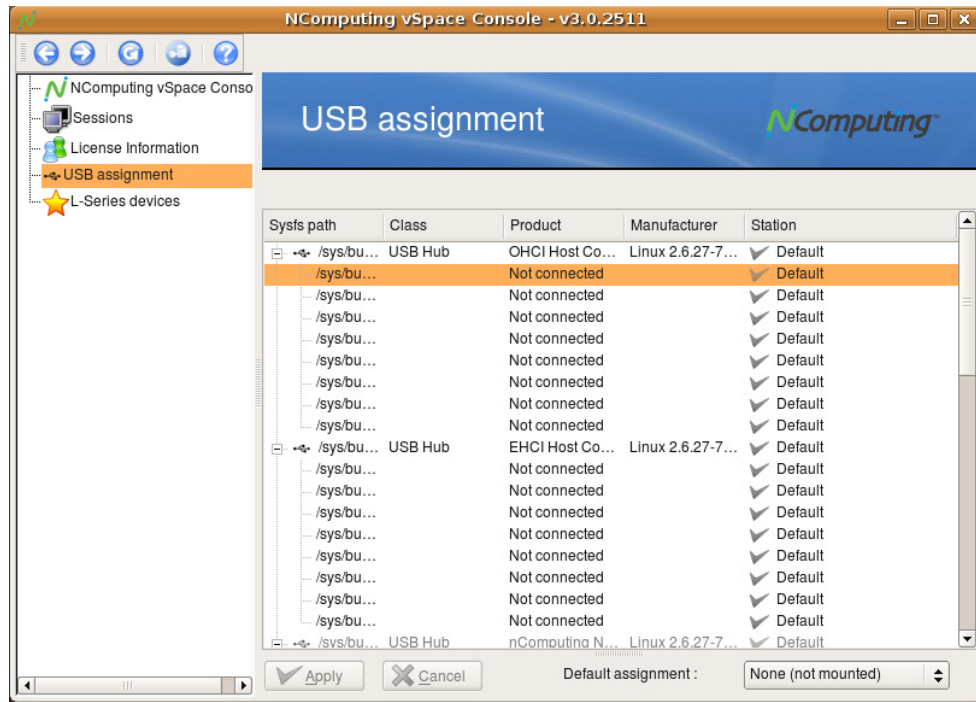
Figure 37 – USB assignment screen

To identify the Linux port that 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 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 new 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:

```
/etc/ncomputing/vspace.com
```

Port defaults are specified by the following numeric convention:

```
 0 None (device will not be mounted)
-2 Mount device to Host station/session
-3 Mount device Shared read-write
-4 Mount device Shared read-only
```

After all specific USB assignments have been made using the NComputing Administration Console, those 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 double logically identified using a USB 1.1 device and then using a USB 2.0 device. Then the physical port must be logically "double assigned" under both the "UHCI" and the "EHCI" controller designations.

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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".
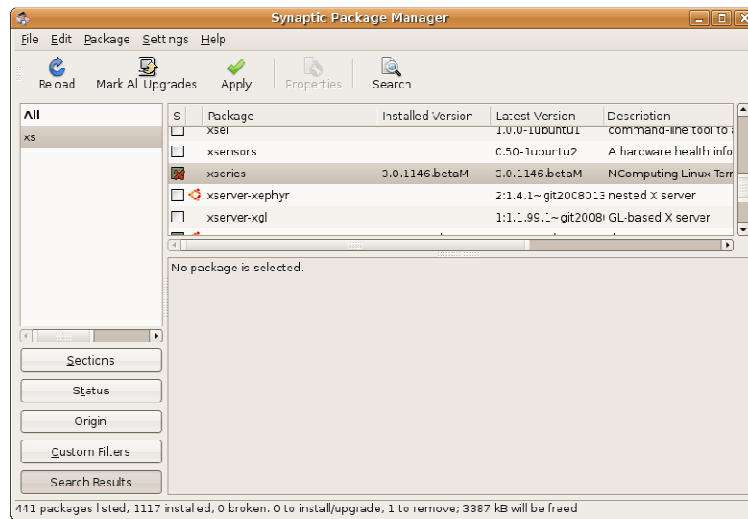

Figure 38 – Uninstalling vSpace for Linux