IBM NetVista Thin Client with TurboLinux Service Update 3

Installation Readme

This product contains scripts to install and preconfigure a TurboLinux Workstation 6.0.7 tree on a Linux server from which IBM NetVista thin clients can boot from. Throughout these scripts, statements enclosed in [ ] are default values. If you press Enter, this value will be used. Statements enclosed in ( ) are the possible values to be used by the scripts.

Release Notes

- This release contains 3 CD's
  - **IBM NetVista Thin Client with TurboLinux Service Update 3 - Installation**
    - Installs for both Linux servers and Windows servers are on this CD. It also contains the IBM NetVista Thin Client Operations Utility for both Linux and Windows servers.
  - **IBM NetVista Thin Client with TurboLinux Service Update 3 - TurboLinux Workstation 6.0.7 Object Code**
    - This CD is requested while installing on a Linux server.
  - **IBM NetVista Thin Client with TurboLinux Service Update 3 - TurboLinux Workstation 6.0.7 Source Code**
    - This CD contains some of the source RPM's.
- For additional information, please refer to these documentation sources.
  - IBM NetVista Thin Client with TurboLinux Readme
    - This Readme file contains information and tips about using IBM NetVista Thin Client with TurboLinux.
    - It is located in /nstation/linux/IBM/ReadmeClient.html
  - Kernels for NetVista Thin Client
    - This Readme file contains information about the available kernels.
    - It is located in /nstation/linux/README.kernel
  - IBM NetVista Thin Client Hardware
    - For additional information on setting up your IBM NetVista Thin Client hardware:
      - Go to the NetVista Publications website http://publib.boulder.ibm.com/netcom/html/pub.htm
      - Under the **Thin Client Hardware Information** heading, click **Hardware Information**
      - Scroll down the page until you see the following: **IBM NetVista N2200 Thin Client Reference** or **Setting Up IBM Network Station Hardware - Type 8364 (Models Exx & Txx)**
      - Click the PDF link to the right of the desired language.
  - IBM NetVista Thin Client support web site: http://www.ibm.com/pc/support
    - Select "NetVista thin client" from the "Browse the support site" drop down list, then select the "NetVista Thin Client" icon.

Prerequisites:

- A Linux system with NFS capabilities
  - TurboLinux
  - Red Hat
  - SuSe

    - Caldera
- Approximately 550 MB of available disk space
- NetVista thin client boot monitor dated **07/16/01** (included in the installation tree as bflash.2800 and bflash.2200). See the ReadmeClient.html file located in nstation/linux/IBM for information about updating your NS Boot Version.

Information for Specific Server Distributions:

- Caldera
    - The cdrom automount functionality in Caldera behaves in a manner which can cause problems with this installation program. When prompted to put in the TurboLinux Workstation 6.0.7 CD, a window will open displaying the contents of the CD. Do not close this window as it then unmounts the cd and can lead to errors with this installation.
- RedHat
    - On RedHat 7.1 servers, you will need to allow for nfs connections if you have installed with medium or high level firewall security. To do this you need to add udp:2049 to the trusted ports during installation. If you have already installed you can add the following line to /etc/sysconfig/ipchains.

```
-A input -s 0/0 -d 0/0 2049 -p
udp -j ACCEPT
```

Installation

To initiate the installation process issue the command ***<CDROM>/Linux/products/nvTCLinux/NetVista_Install*** where <CDROM> is the mount point for your cdrom (typically /mnt/cdrom). This script will ask you the following questions:

- CDROM Drive Mount Point [/mnt/cdrom] ?

When this script is finished it will prompt you to execute the command ***/tmp/NetVistaLTC/TurboLinux/tl_install.sh*** which will ask the following questions.

- Please select Installation type:
  1. Local CDROM
  2. NFS

  Enter Selection:

  Option 2 is useful if you want to install the product on multiple servers. An iso image of the TurboLinux 6.0.7 RPM cd can be created and then nfs exported.

- Server IP Address [x.x.x.x] ?
  The installation program attempts to determine the server's IP address. If the one defaulted is correct, press ENTER. If you have more than one network card installed, you may need to specify the IP address of the network card you wish your thin clients to connect through.
- 1) Caldera Open Linux 2) RedHat 3) SuSe Linux 4) TurboLinux 5) Other
  Which Linux distribution are you running on this server?

- Installation Directory [/nstation/linux] ?
- If you are upgrading to a new service update level or are reinstalling the product, the following question is displayed:

  Detected existing installation. Would you like to upgrade or re-install previous installation (U/R) ?

  If you are upgrading, the install will start the upgrade using the installation settings from the original install. If this is a new install, or you are re-installing, the install will continue with the following questions.
- Client Machine Specific Directory [/nstation/machines] ?
  This directory will contain information that is specific to each client. Client specific data contains information that cannot be shared between clients such as snmp community configurations.
- Machine specific directories based on MAC address or IP address [MAC] (IP/MAC)?
  This option lets you choose how the machine specific directories will be created. Using the MAC address is useful in a DHCP environment where a client may not be getting a static IP address but you still want that client to have its own specific data.
- 1) Thin clients authenticate to server (DEFAULT)
  2) No authentication to server
  Select the mode you want for server booted clients?

  Authenticated or non-authenticated install: When the Linux client is installed on a server, an install question asks if authentication should be enabled for server booted thin clients.
  - If authentication is enabled, server booted thin clients stop at a login screen. You can create a system default desktop using the Setup Utility; the system default option is only available to the "root" user. Other users can have their own desktops, which override the system default desktop. Note: The system default desktop includes Setup Utility desktop mode and any ICA client connections configured in the ICA Remote Application Manager. Each user has their own home directory (hence their own Netscape bookmark and proxy config files, etc).
  - If authentication is not enabled, thin clients power up directly to a desktop (there is no authentication). You can create a system default desktop using the Setup Utility. Other thin clients can have their own machine specific desktops (by MAC or IP address), which override the system default desktop. Note: The system default desktop includes Setup Utility desktop mode and any ICA client connections configured in the ICA Remote Application Manager. Each thin client has its own machine specific home directory (hence its own Netscape bookmark and proxy config files, etc).
  - Note: All Setup Utility desktop modes (launch button and the full screen single client modes) are available for authenticated and non-authenticated installs.
  - Note: Flash booted thin clients do not authenticate independent of how the authentication question is answered during install. If you will have all flash booted thin clients (installing the Linux client to customize the flash card contents), you can use either an authenticated or non-authenticated install.

- An installation summary screen is displayed. For example:
  Installation of Server Boot TurboLinux WorkStation 6.0.7 Linux client for IBM NetVista thin client
  Current selections:
  Server IP address: 172.16.1.2
  Client boot directory: /nstation/linux
  Client SPECIFIC directory: /nstation/machines
  Client SPECIFIC directory type: MAC

  Do you wish to continue, restart, or exit installation? (c/r/e)

- At this point, the install will have enough information from your install method (new install, upgrade or re-install) to start the installation. The install will begin by stopping the nfs daemon and extracting the RPMs. You will see progress hash marks being printed for each rpm being installed. If you encounter problems after the installation, you can check the following logs in /tmp/NetVistaLTC/TurboLinux/tmp.

  install.log - contains a copy of your installation choices
  rpm.log - contains information on rpm's that failed to install
  rpm.err - contains information on rpm's that were installed but had some errors such as "execution of script failed". These errors are due to some post and pre install scripts that fail due to being installed in a directory other than / and can be ignored. An error that could cause problems is if an rpm fails to install due to not having enough space on /nstation/linux. In this case you will want to see how large of partition you have on /nstation/linux.

  Upon completion of the script, nfs will be started again.

Booting the Thin Client from the Server:

First, verify that the client boot monitor is at a level that supports booting Linux (see Prerequisites) and update it if necessary. Then, boot the client in NSBoot mode and modify the settings as follows:

For Linux Boot, the following parameters in the boot menus should be modified:

- Display settings
- Network settings
  - Set "Network priority" to use NVRAM or DHCP, disabling all other options.
  - Set "Boot file source" to Network
    - If NVRAM, set client IP address, Domain name server IP address, Gateway IP address, Subnet mask.
    - If DHCP, make sure a server responds to DHCP requests.

- Boot file server settings
  - Boot file server IP address
  - Boot file server directory and file name
    - /nstation/linux/kernel.2800 for model 2800
    - /nstation/linux/kernel.2200 for model 2200
  - Boot file server protocol
    - TFTP - Disabled
    - NFS - First choice

Once Linux is Running on the Client:

- Installing additional applications
  You can install additional rpm's by putting the rpm on the server where it is accessible to the client (anywere under /nstation/linux). Then login to the client as root and install the rpm with **rpm -Uvh your_rpm.rpm**.

Software Service and Support:

This Customer Service and Support guide applies to U.S., Canada, and Puerto Rico only. Outside those countries, contact your local IBM representative or Authorized IBM Supplier for information on warranty and software support. This product is supported by IBM Support Line.

Possible sources of selfhelp can be found at our support web site: **http://www.ibm.com/pc/support.** Select "NetVista thin client" from the "Browse the support site" drop down list, then select the "NetVista Thin Client" icon. Once there, you may want to bookmark the site.

If you are a licensed customer in the U.S. or Puerto Rico who has a support contract and you need support, please have the following information available, then call 1-800-237-5511. In Canada, call 1-800-IBM-SERV (1-800-426-7378).

- The product name and version number
- The kind of hardware and software you are using
- What happened and what you were doing when the problem occurred
- Whether you tried to solve the problem and how
- The exact wording of any message displayed

You can report suspected defects via fax or mail until the product's Service Expiration Date. We will respond to you using the same method. The Service Expiration Date is defined in you License Information booklet under Program Services.

For information on reporting suspected defects, you may call 1-800-297-5511 in the U.S. and Puerto Rico. In Canada, call 1-800-465-9600.

If you are a licensed customer who does not have a support contract and you need support, you will need to call one of the following numbers to purchase a contract:

> If you have an IBM Customer Number, call 1-888-426-4343 Monday - Friday 8:00 AM to 6:00 PM Central time. In Canada, call 1-800-465-9600 Monday - Friday 8:00 AM to 5:00 PM customer time zone.
>
> If you do not have an IBM Customer Number, call 1-800-237-5511 Monday - Friday 8:00 AM to 5:00 PM customer time zone. In Canada, call 1-800-465-9600 Monday - Friday 8:00 AM to 5:00 PM customer time zone.

Information on IBM Support Line is also available on the Internet (http://www.ibm.com/services/its/us/swsupport.html).

Hardware Service and Support:

Customers can report hardware problems by calling 1-800-IBM-SERV (1-800-426-7378) in the U.S., Puerto Rico, and Canada.

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