SIMPLENETWORKSTARTER:
Pointing and Clicking Your Way to a NeXT Network

Setting up a network for a group of UNIX® machines used to require the patience of a saint and the wisdom of Solomon. Even if you were able to follow the circuitous step-by-step instructions, carefully editing what you thought were the right files, it seemed that something always went wrong. Either the permissions were not exactly right, or the correct file systems were not mounted. If your worst fears were realized, the server went down, taking the network with it, and work ground to a halt.

To address this problem, NeXT developed a solution based on a combination of database technology and a suite of easy-to-use network administration tools. The first step of the solution was to collect all the network administration information in a single database known as the NetInfo™ Database. The second step was to develop a set of easy-to-use "Manager" applications for managing the network and updating the NetInfo

Database. While this was a vast improvement over older methods, managing networks still required too much knowledge and training.

As a result, engineers at NeXT took on the challenge of developing an application to make starting a network so simple that you would not need to be a networking expert. The result? SimpleNetworkStarter.

What SimpleNetworkStarter does for you

SimpleNetworkStarter assumes you are not and do not wish to become a

networking expert. Rather, you simply want to get your systems networked so you can get on with real work. Even if you are a networking expert, you probably still want to get the repetitive set-up tasks done quickly. With SimpleNetworkStarter, you start the application and click your way through the entire process, making choices about how you want your network set up. SimpleNetworkStarter creates the NetInfo database, edits the appropriate files, mounts the right file systems, and gives users the permissions they need to access file servers and get their jobs done.

The biggest advantage of SimpleNetworkStarter is that both the relative novice and the experienced system administrator will find it useful. If you have a basic understanding of network concepts (which means, for instance, that you know what servers and clients are) or if you are a seasoned system administrator bored with performing routine network set up, you can use SimpleNetworkStarter to link together from 2 to 20 NeXT computers in a simple network. Since SimpleNetworkStarter is mainly a user interface for the NetInfo database, any network you build with SimpleNetworkStarter can be easily reconfigured later using the full NetInfo administration suite. SimpleNetworkStarter lets you build networks quickly and then later, as necessary, go on to more complex administration tasks, such as linking groups of smaller existing networks.

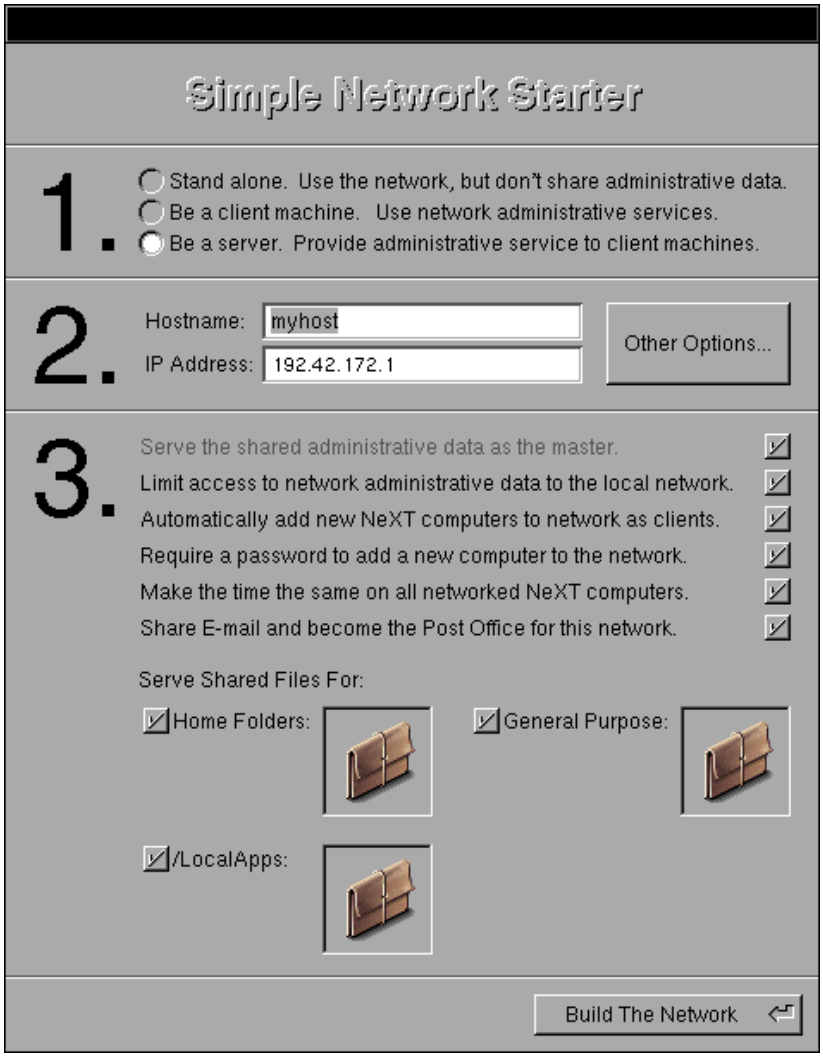
What SimpleNetworkStarter doesn't do

SimpleNetworkStarter is intended for simple networks; it does not give you the complete range of administrative options provided by the NetInfo administration applications. If you want to add host aliases or create a three-level NetInfo domain hierarchy, for example, you must use the other Manager applications. You can use SimpleNetworkStarter, however, to set up the simple network before adding these advanced features. Also, SimpleNetworkStarter is not intended to be a network management tool. After you use it to set up your network, you must use UserManager, HostManager, NFSManager, PrinterManager, and NetInfoManager to maintain your network.

How to use SimpleNetworkStarter

Just as when you move into a new house you must determine the optimal locations for the stereo speakers and the sofa, so must you determine the configuration of your network. Before using SimpleNetworkStarter, ask yourself, "Which system has enough horsepower to be the master server for this network? Which system would make the best clone server in case the master goes down? Have we chosen sufficiently bizarre and aptly descriptive names for all the systems in this network? Did I get an Internet address for the master server? And, what about file servers, mail, and printer services?" If these questions are unfamilar to you, you may want to read up on basic networking concepts and tools in the *NeXTSTEP Network and System Administration* manual. Once you have formulated your network plan, you can start up SimpleNetworkStarter and begin setting up your network. SimpleNetworkStarter provides a series of check boxes and makes the required modifications based on your choices.

To configure your master server, start up SimpleNetworkStarter, located in /NextAdmin. If you are not logged in as root, SimpleNetworkStarter asks for the root password. Once you have supplied the password, the Simple-



The SimpleNetworkStarter main window. In item one, the administrator specifies what kind of machine is being configured; item two requires the host name and IP address; and item three allows the user to choose which services the configured machine will provide.

NetworkStarter main window appears.

First, you need to specify what kind of machine you are setting up. Is it standalone, or a client or a server of a network? Next, enter the host name and IP address. If the machine is a server, what kind of services does it provide?

For each selection, click the applicable buttons, following your network plan. Then click Build the Network. That's all there is to it. Once you configure the master and clone servers, the process gets even easier. For each new host, you only need to turn on the system and supply the host name when prompted (assuming you are using automatic host addition).

Behind the scenes

When you use SimpleNetworkStarter to set up file sharing, it stores information in NetInfo. This includes export options, mount options, and server locations. All shared directories exported with SimpleNetworkStarter are exported with the option root=-server, where server is the host name of the file server. All imported directories are mounted with the options bg, intr, and noquota. Directories exported from home directory and general purpose servers add the option net. The locations directory in NetInfo holds information about servers. Here you will find the subdirectories homes (home directory servers), generalpurpose (general purpose servers), and localapps (for shared applications). Under these directories are individual directories for each server. These directories store the name of the exported directory and the name of the server from which it is shared. An additional subdirectory under locations is sendmail, which stores the host name of the mail server and the complete path of the sendmail configuration file.

How to get SimpleNetworkStarter

SimpleNetworkStarter is a feature of NeXTSTEP Release 3, so it is a part of every new NeXT computer. You may also get SimpleNetworkStarter by upgrading your NeXT computers to Release 3.

For more information

For ongoing, in-depth information about NeXT networking and system administration, call (800) 848-NeXT to inquire about subscriptions to NeXT's quarterly technical publication, *Support Bulletin.*