

UK UNIX User Group

Linux Conference 2003

The NX Project

What is NX?

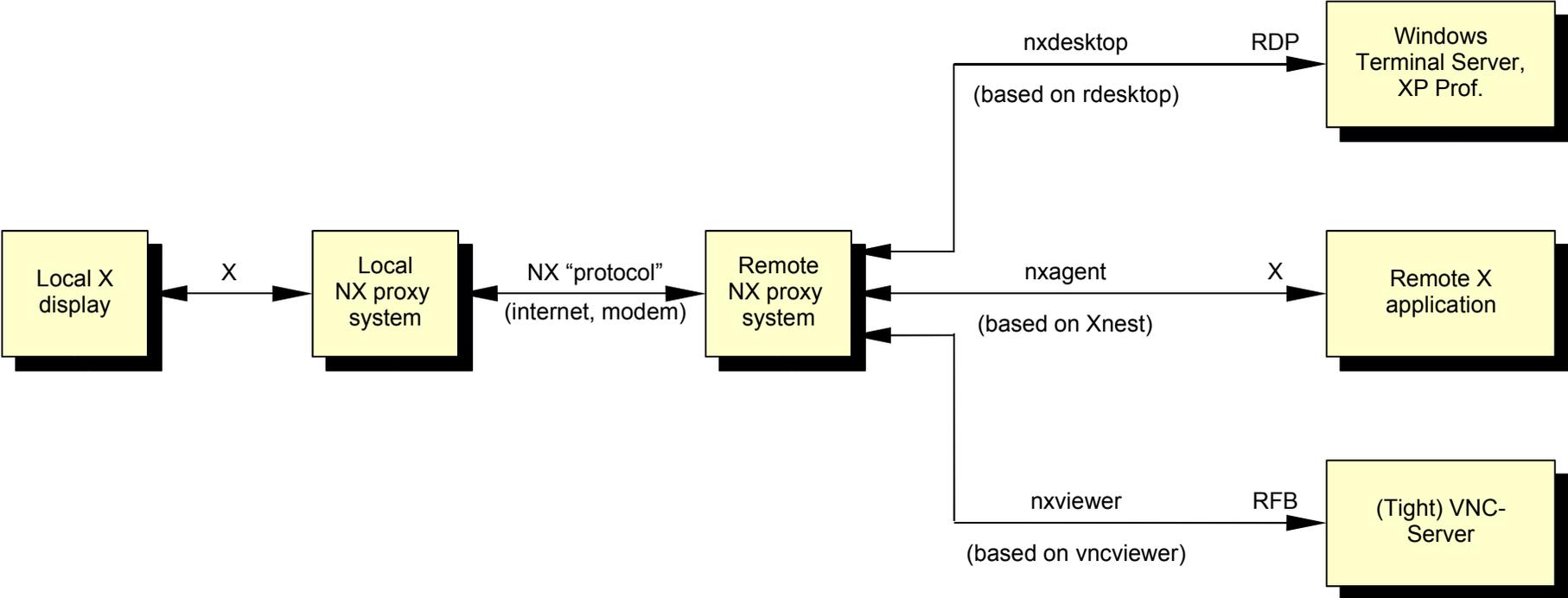
- NX is a remote desktop system based on X-Window
- Adds features to X-Window usually found in proprietary systems like MS RDP and Citrix ICA
- Makes possible to run contemporary Unix applications over the Internet
- Compresses the X protocol by an average factor of 50:1 and more
- Allows users to work comfortably on 28.8Kbps or even 9.6 Kbps modem connections
- Reduces X protocol round-trips nearly to zero

- Implements image streaming algorithms to reduce the perceived latency
- Is able to translate RDP and RFB foreign remote desktop protocols to X
- Runs these foreign remote desktop sessions faster than their native protocols
- It integrates with SMB to provide access to the client's file systems
- It integrates with ARTSD and ESD to allow media playback
- Adds server management tools to handle X, RDP and RFB sessions run by users

- Architecture is designed to distribute the server workload between multiple nodes
- It leverages SSH remote execution capabilities to avoid the need to run a new network server
- It is able to encrypt and protect the network traffic by tunneling the connections through SSH
- Server is intended to run on any Unix OS
- Client runs on Linux, Windows, Solaris, Mac OS/X, Sony Playstation/2, MS Xbox and embedded devices like HP/Compaq iPAQ and Sharp Zaurus

- NX core components and X compression libraries are released under the GPL license
- NX client GUI (nxclient) and the NX server manager (nxserver) are commercial software
- The NX client-server protocol is open
- A library handling the client-server protocol and a compatible command-line NX client have been released under the GPL license
- NoMachine has publicly offered its help to let OSS developers build a free implementation of both the nxclient GUI and the nxserver

NX System Architecture



What features are missing?

- X session persistence and reconnection
- Better support of RENDER extension
- Better support of X applications in seamless mode
- Better support of SMB file-sharing and printing
- Seamless access to client's peripherals and devices
- A new multimedia architecture with native streaming of media formats

- Better integration with Unix and Windows desktop environments to allow point-and-click remote execution of applications
- Better server management tools, including a Web administration interface
- An open API to let customers and developers to write server extensions

What NX would like to become?

- A convenient way to let users of mobile phones and other thin devices to get access to complex, rich applications
- A server infrastructure by which people can easily run applications regardless they reside on the local machine or a remote server
- A peer-to-peer computing environment where users can easily access computing resources, like storage and printers, on any server available on the Internet
- A step in the direction of the "network desktop" envisioned by many