

Remote Control with VNC, Eliminate and NX

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Agenda

Market Overview

Value Proposition

VNC

Eliminate

NX

Just Doc's opinion

This presentation is from Doc to IVNUA

These opinions Doc's

Market Overview

How to you train a flea?

The same way you train an elephant

How do you boil a frog?

The net gets faster over time and remote control becomes more efficient over time

Classic tools like VNC get better automatically

New tools like NX (nomachine.com) and Elluminate (elluminate.com) extend on the idea to bring a new class of service

Often at no cost

Market Overview

Keeping it green?

With the combination of remote control and web conferencing you can save a few trips a month

With the combination of remote control and web conferencing you can give faster service

If we all save 2 trips per month, 24 per year for thousands of professionals – that's real green

Three tools – VNC, NX and Elluminate

VNC

Project out of AT&T Labs in Cambridge

Current providers (among the dozens)

TightVNC (SuSE includes)

UltraVNC

realvnc

Current uses (among the hundreds)

Novell

VMware

XEN

VNC - basics

Radically multi-platform

Linux, Windows, MAC OS and...
AIX , Acorn RISC OS, Amiga, BeOS, BSDI, Cygwin32, DOS, EPOC (Psion), FreeBSD Geos (eg. Nokia 9000), GGI, HP/UX, HP Jornada Java, LinuxPPC, Thing, NetBSD, NetWinder, Oberon, OpenBSD, OpenStep/Mach, OS/2, OSF, Palm devices (PalmPilot, Palm III, etc), SCO OpenServer SGI Irix, SPARC Linux, SunOS 4.1.3, SVGALIB (Linux without an X server), Single-floppy Linux, VMS, Windows CE

And many many more

VNC basics

Using traditional X server technology, VNC exports and X display to a remote viewer

This is not usually the “real” X display

It is created and exported so it's not the screen the primary user is seeing

Various algorithms are used to detect changes in the display and send those to the viewer(s)

Mouse and keyboard is received from the viewer and passed into the X as if the user were local

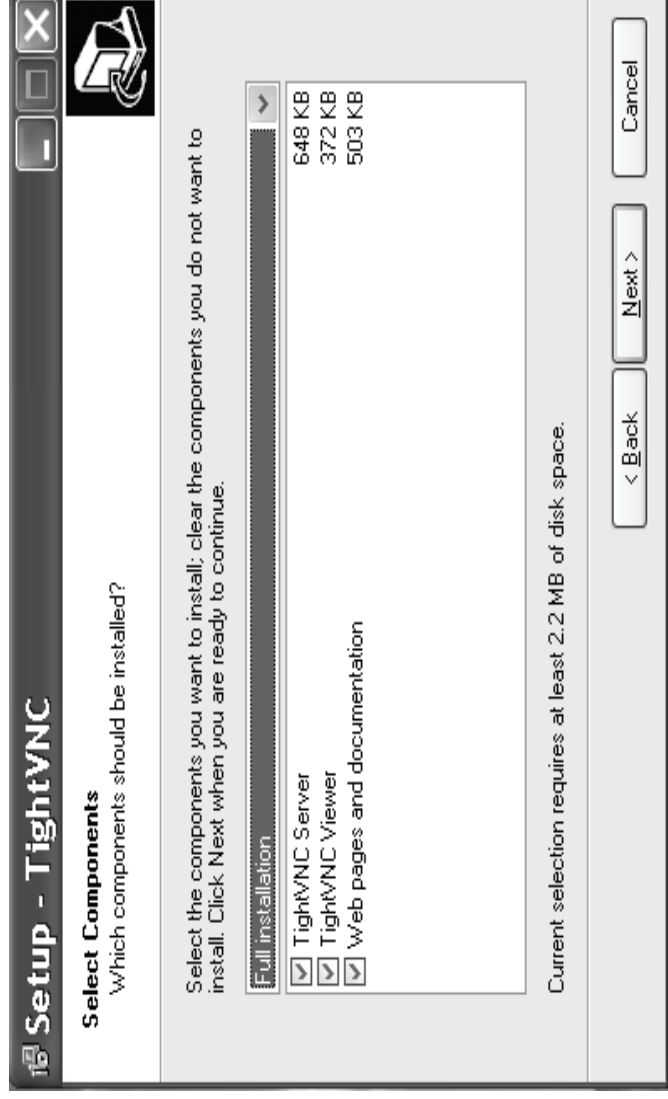
VNC – basics

VNC commonly uses a port number assigned to each exported display

On Linux `vncserver :1`

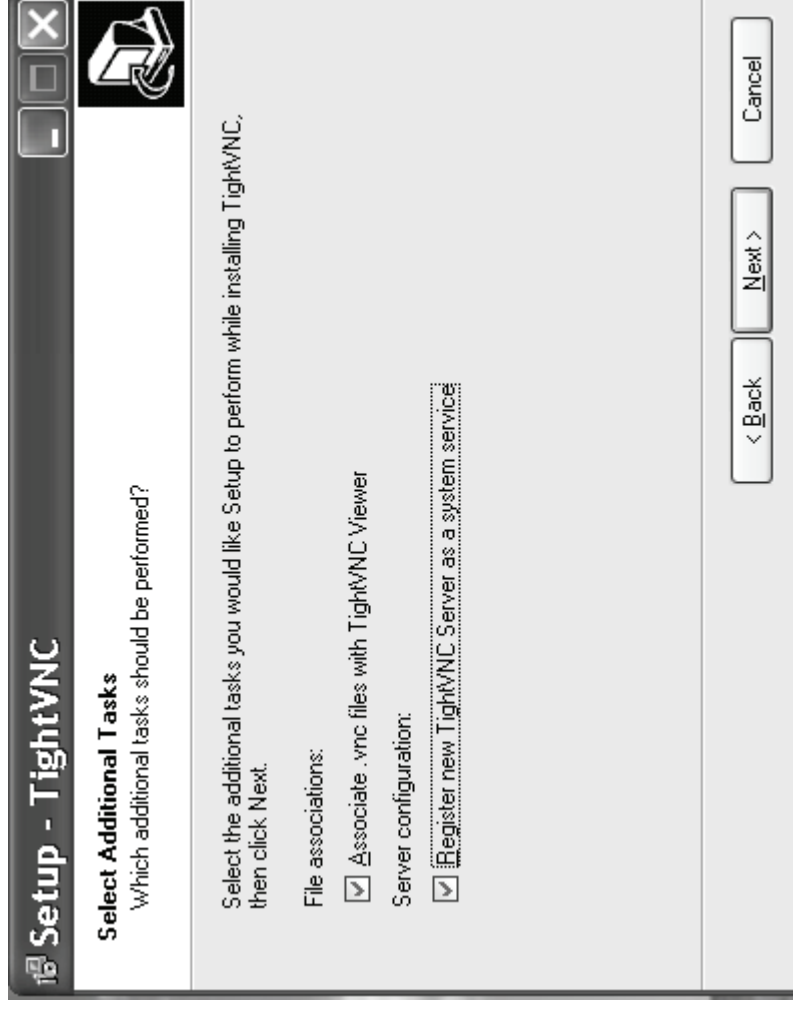
On Windows

VNC servers usually include a web interface as well as a native client interface



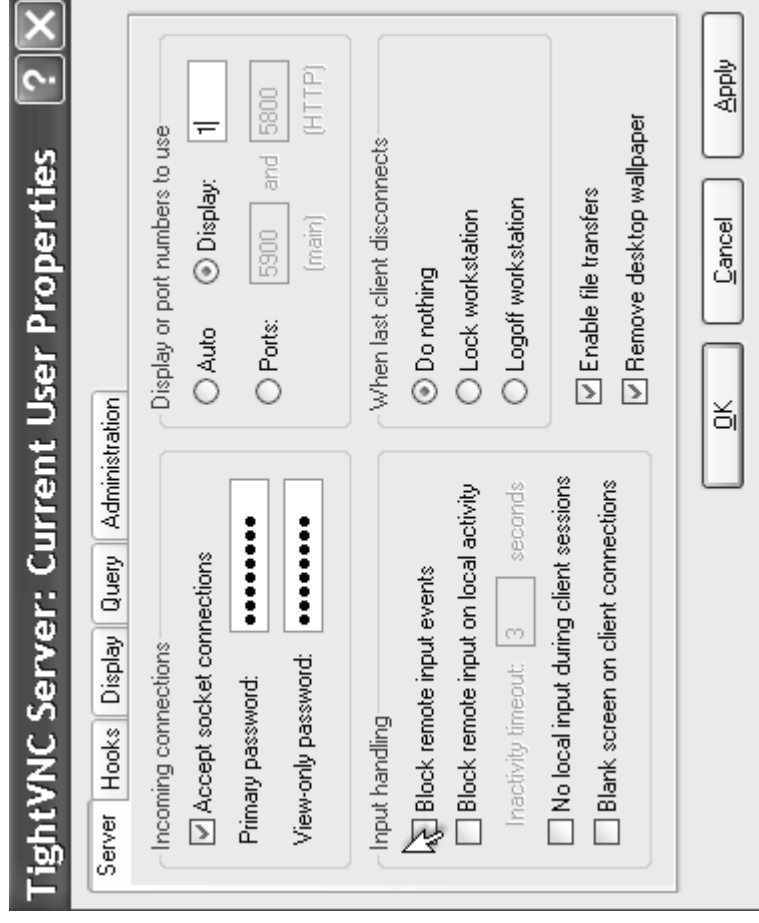
VNC – basics

If you want to have the server start each time make VNC a system service



VNC - basics

You can set a display to always be ready



VNC - basics

Tracking down the actual port in use can be tricky

`vncviewer host2see:1` usually works

Web browsers will use 5800 plus your session number

`http://host2see:5801`

In fact, the actual port is 5901

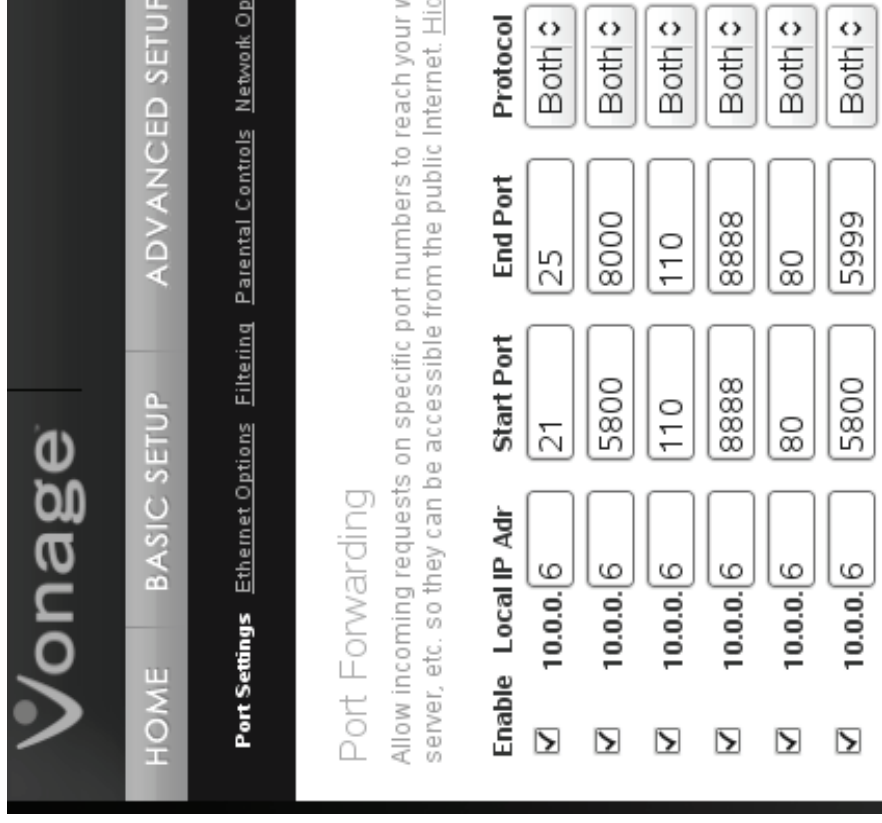
The Web portal starts on 5801 then uses 5901

Standard connections will be on 5900 plus your session number

X11vnc will export the “0” session so you see what the user sees

VNC - basics

If you are setting up behind a NAT, like at home, the right port matters



The screenshot shows the Vonage router's web interface. At the top, there are navigation tabs: HOME, BASIC SETUP, and ADVANCED SETUP. Below these, the 'Port Settings' menu is expanded, showing options for Ethernet Options, Filtering, Parental Controls, and Network Options. The 'Port Forwarding' section is active, displaying a table of port forwarding rules. Each rule includes a checked 'Enable' box, a 'Local IP Addr' of 10.0.0.6, a 'Start Port', an 'End Port', and a 'Protocol' dropdown menu set to 'Both'.

Enable	Local IP Addr	Start Port	End Port	Protocol
<input checked="" type="checkbox"/>	10.0.0.6	21	25	Both
<input checked="" type="checkbox"/>	10.0.0.6	5800	8000	Both
<input checked="" type="checkbox"/>	10.0.0.6	110	110	Both
<input checked="" type="checkbox"/>	10.0.0.6	8888	8888	Both
<input checked="" type="checkbox"/>	10.0.0.6	80	80	Both
<input checked="" type="checkbox"/>	10.0.0.6	5800	5999	Both

Port Forwarding

Allow incoming requests on specific port numbers to reach your web server, etc. so they can be accessible from the public Internet. [Help](#)

Illuminate



Based in Canada

Originally (still) focused on education market

Similar idea to WebEx

“serves over 600 million web-collaboration minutes annually to over 7 million teachers and students located in over 170 different countries.”

One of Deloitte's 50 Fastest Growing Technology Companies and is positioned in the Visionaries Quadrant of the Gartner Magic Quadrant for Web Conferencing, 2008.

Eliminate at Novell

Major features

- Voice over IP
- Instant messaging
- Shared interactive whiteboard
- Import of Open Office and MS Office slides
- Polling and surveys

Major Major features

- No student left behind
- Application sharing
- Two way remote control

Eliminate at Novell

Originally run locally in the NODS lab

Now used globally by Sales, Marketing and Support

Linux users can host with the same features as

Windows users

Used in conjunction with NODS and/or local VMs for complete remote meetings

Meetings can be recorded and replayed

Great for on the spot tech support

Eliminate

Drum roll please....

elluminate.com/vroom

Free 3 user, one room conference

Permanent URL

<http://www.elluminate.com/vroom/m.go?rk=yourmagiccode>

It's not just great conferencing, you can take over the PC of your guests and solve problems.

Elluminate

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Elluminate is committed to providing comprehensive training to meet our customer's needs. We provide live, online training as well as recorded training modules, **Quick Reference Guides** and **User Guides**.

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Elluminate Live! Administrator Training

- ▶ Register for Live Online Training
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NX from NoMachine

Launched NX in 2003

NX Server in 10 server and Enterprise Editions

Clustered Edition

Desktop Edition

For remote Linux desktop

Free 2 user server !

Bing bing bing we have a winner

Excellent compression for smooth remote sessions on
poor links

Is able to tunnel RDP and VNC traffic to other servers

NX

Who uses it?

Novell and...

HP, Google, IBM, Siemens, Motorola, SAP, Philips
Semiconductors, Nokia, Verisign, VMWare, Symbio
Technologies, Trolltech, Toshiba Electronics Europe, AXA
Technology Services, Wind Telecomunicazioni, H3G Italy; in
finance and banking, including BNP Paribas, Nexus Financial,
and Great-West Life & Annuity; in transportation and freight,
namely, Lufthansa Airlines, Europ Hall, Frans Maas, St Jude's
Children's Research Hospital, Biofocus, Medtrac, Debio
Recherche Pharmaceutique etc

NX

The commercial product is as good as it gets

The same people that write the commercial version write the free version – FreeNX

The free server on the backend works great with the commercial client

The commercial client is free

Bing bing bing we have a winner

Server installation is a snap

```
rpm -ivh FreeNX NX
```

FreeNX is the server, NX is the agent that does compression
etc

NX

Once the server is installed, run nxsetup on the server

Press enter and accept all of the defaults

The server is a function of ssh so it doesn't need to be started etc

Download the client

Get the fonts for Windows

The free server is on the same page



NX

Install the client

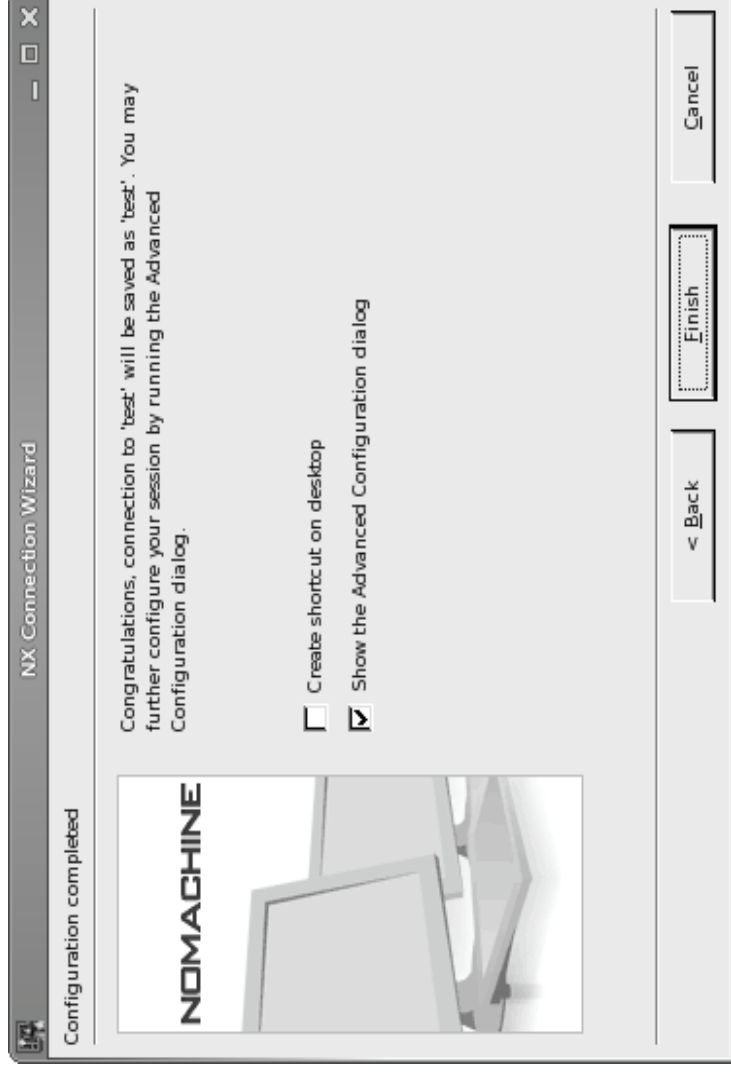
Windows, Linux or Mac – all free

Get a free fonts package for Windows

Ignore the free open source client

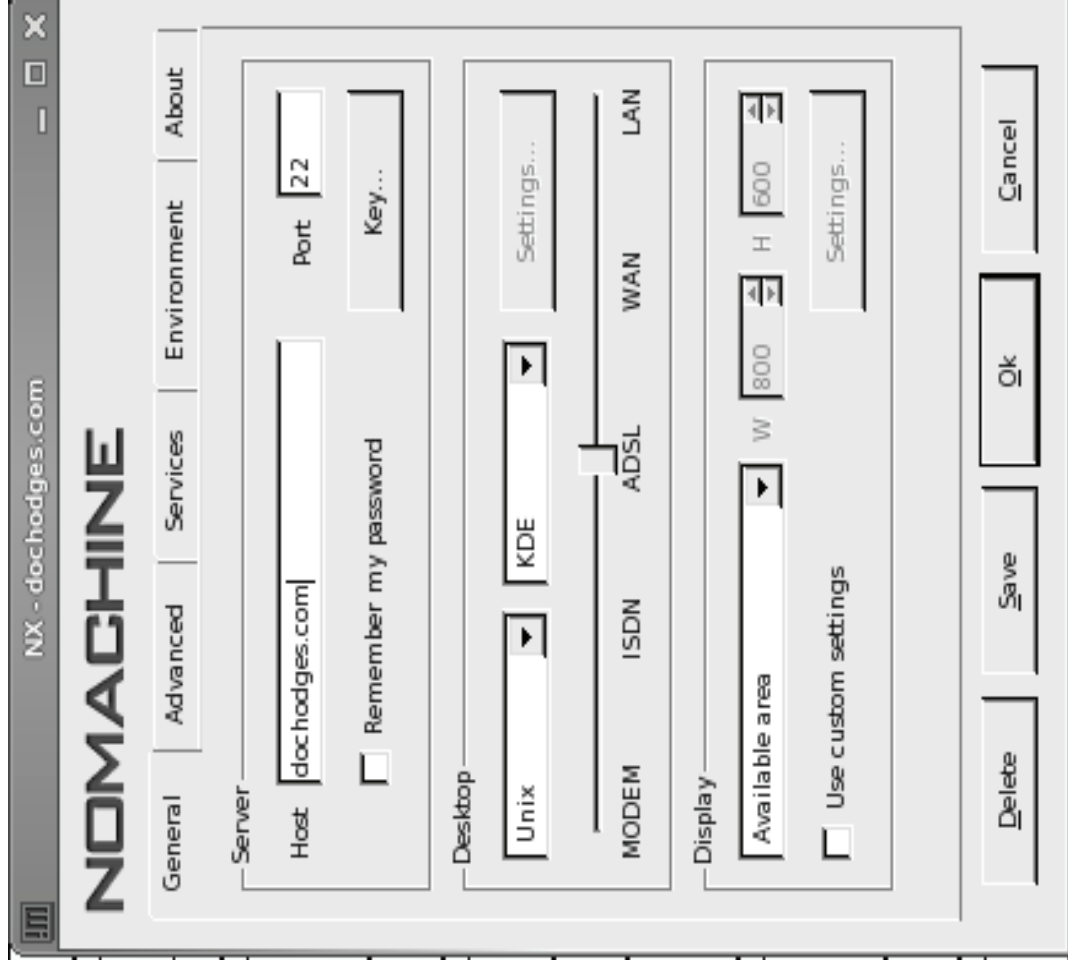
Accept all the defaults except the last page of the install

Reverse the defaults as shown here



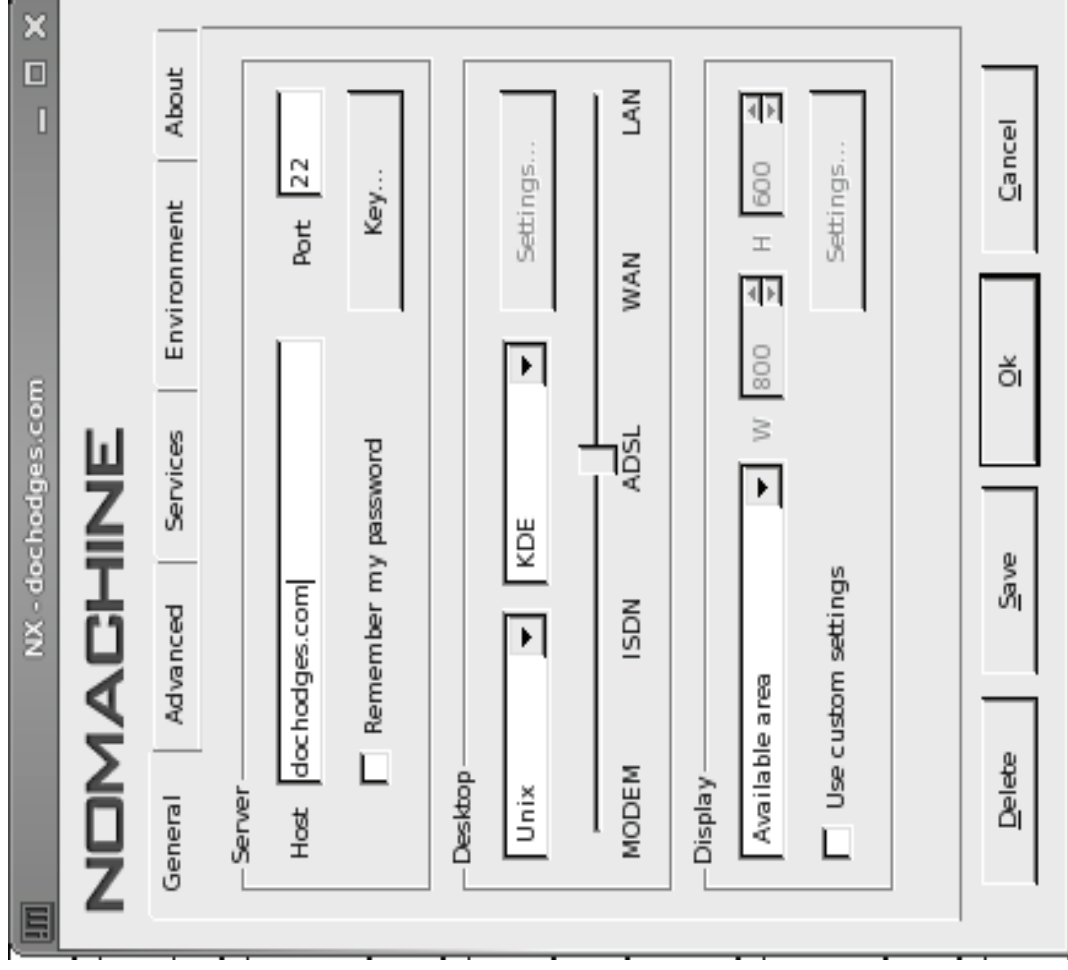
FreeNX

Fun with connections



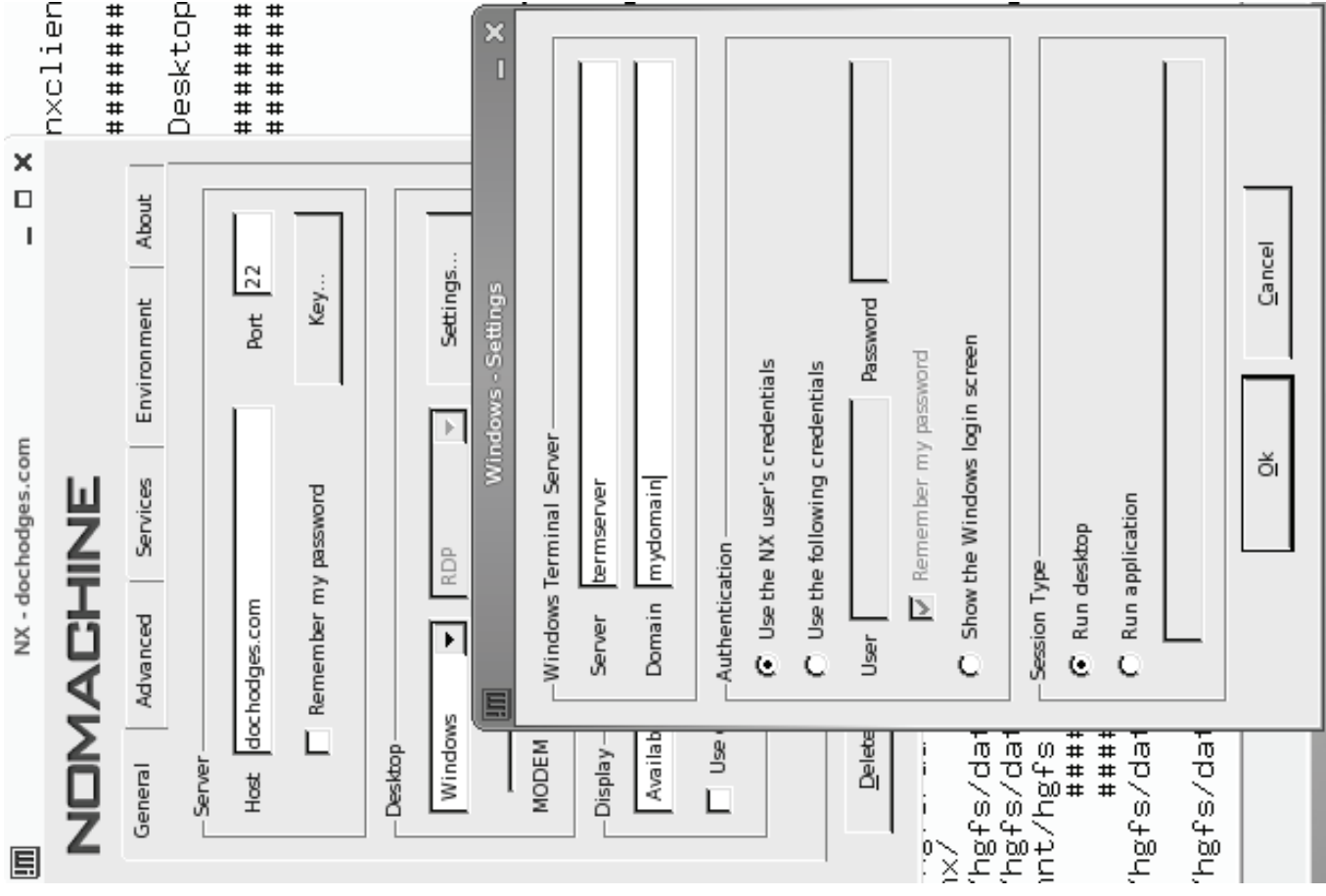
FreeNX

Fun with connections



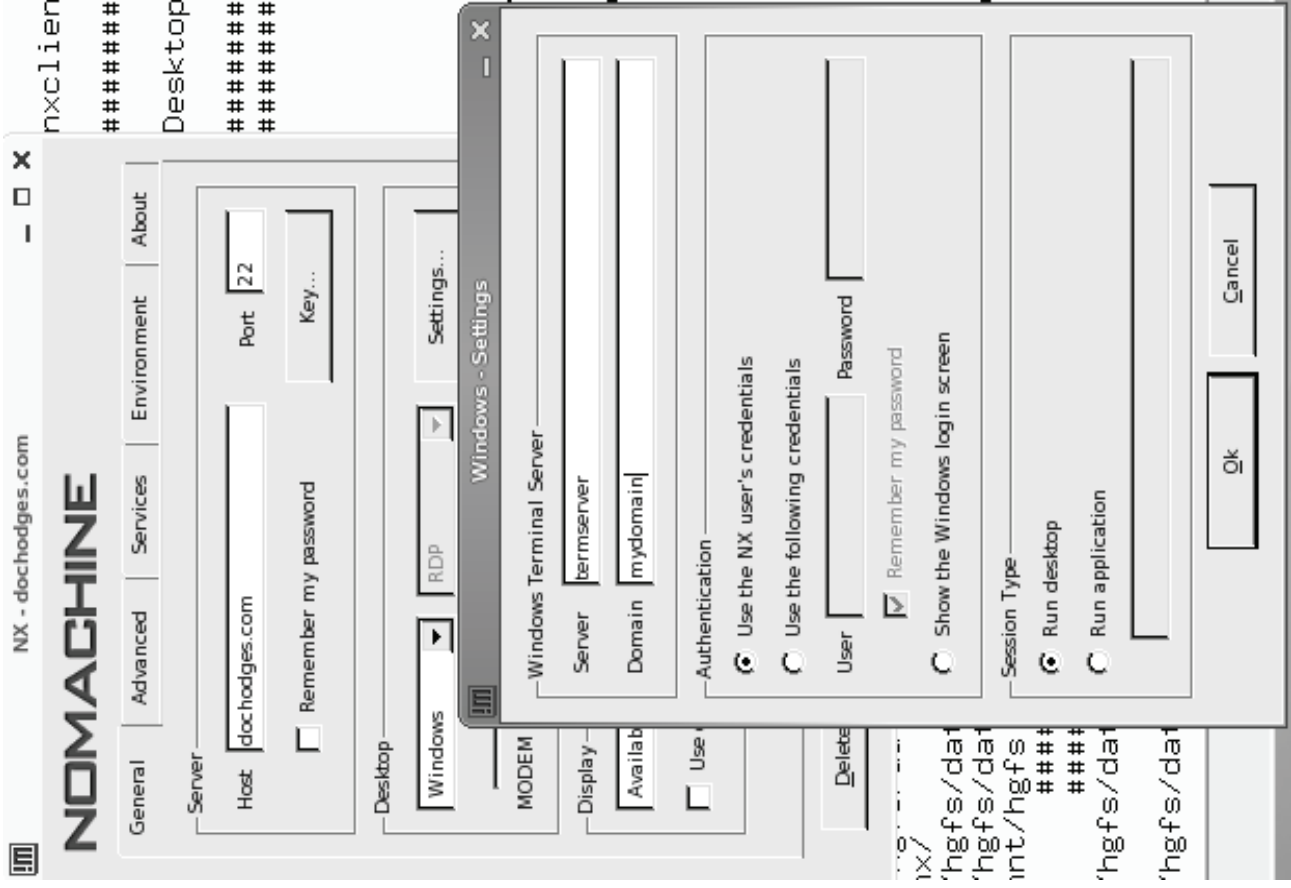
FreeNX

Fun with connections



FreeNX

Fun with connections



Combining Elluminate with VNC

Why?

With Elluminate and VNC you can share slides, VOIP and a demo easily

Multiple presenters and demo providers can host

Cautions

- VNC demos do not resize

- Elluminate will resize but at a heavy quality and speed cost

If the demo is on your machine you don't need VNC or NX

Combining Elluminate with NX

Why?

With Elluminate and NX you can share slides, VOIP and a demo easily

Only one user can use an NX demo at a time but by turning over remote control to an attendee, multiple presenters can use NX with Elluminate

Cautions

NX demos may not resize with all clients and all setting

VMware tools are useful in resizing

Firewalls

The best demos can be stopped by firewall

5900+ are usual for VNC

Consider moving above that to thwart hackers

Ask your IT to open 5910-5930 and 5810-5830

Current firewall will not be fooled by moving your 5900 session to port 80

NX uses 22 for all sessions

22 is the ssh port

22 is a favorite of hackers – we get thousands of hacks daily

Consider asking IT and the client to open 22 to your address for a limited period of time

Test first

Summary

Remote control has made big stride in recent years

Internet access and speed is always improving

The fastest internet cannot outrun a firewall

Free software in the remote control area is often the same software as their commercial counterpart

You can save your customers/companies money by using the free versions where appropriate

Your house is a great lab

Q&A