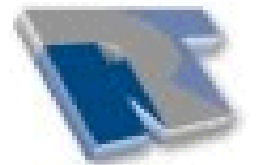# The Business Case for Linux

Amy Tanner
amy@real–time.com

Business Case Study
Churchill Capital

Outline

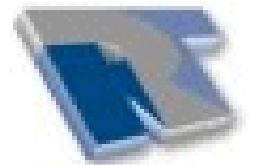- Background
- Why Change?
- Solutions Considered (NT, Novell, Linux)
- Solution Chosen (Linux)
- Problems
- Benefits
- Cost Savings
- Conclusions

Background

February 1999

- Novell Netware 3.11 network
- 45 users
- Windows 95 clients
- DSL Internet connection
- ElronFirewall on Windows NT Server
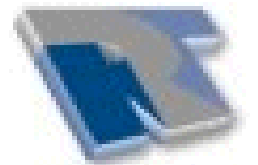- Linux web & mail server

Why Change?

- Netware 3.11 Not Y2K–compliant
- Needed more firewall licenses
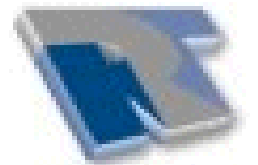- Desired more control in–house

Solutions Considered

- Novell Netware
- Windows NT
- Linux

Why Not Novell Netware?

- Experimental Netware 5 server hard to understand
- TCP/IP not native to Novell
- Cost of server and client licenses
- Dependence on outside experts
- Requirement of additional protocols on desktop

Why Not NT?

- Expensive Client licenses
- Wary of Continued Need to Patch NT
- Unreliability & quirks of existing NT server
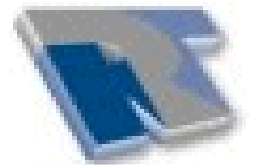- Would increase dependence on outside experts

Why Linux?

- No license fees
- Ability to use inexpensive older machines
- Advent of Linux firewall
- Y2K–compliant
- Native use of TCP/IP
- Does not require additional protocols on desktop

Implementation

- Linux file server running samba
- Linux print server running lpd
- Linux firewall running ipchains

Problems

- Lpd frequently got wedgies
- printing was difficult to setup
- linuxconf problems

Benefits

- Samba File Server
- Linux Firewall

Samba File Server

Benefits

- Could build experimental machine for free
- Change from Novell to Samba would be transparent to users
- Login scripts enable automatic drive mapping
- Permissions controllable at Samba script level
- Linux groups interface nicely with samba perms
- Automatic mapping of home directories
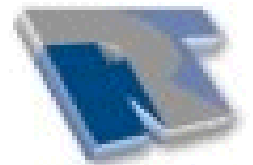
Linux Firewall

Benefits
- Low operating system cost
- No user license cost
- Stable, reliable firewall
- Linux firewall support
- Remote administration
- Ease of using/editing scripts
- Linux firewall worked for all ports
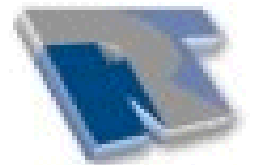
Cost Savings – File Server

	Operating System	Licenses (75–user)
Linux	$0	$0
		——————
Total Cost		$0

	Operating System	Licenses (75–user)
Netware	N/A	$7100

Cost Savings – Firewall

	Operating System	Licenses (75–user)
Linux	$0	$0
		——
Total Cost		$0

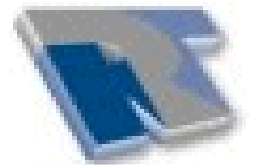|	Operating System	Licenses (75–user)
NT	$650	N/A
Elron	N/A	$5000
		——
Total Cost		$5650

Conclusions

- Disadvantages
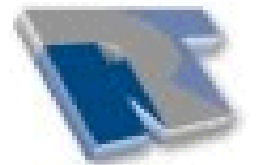- Advantages
- Cool Linux Examples

Disadvantages of Linux

- Techs like to fix problems, not teach
- Linuxconf doesn't always work properly
- Must stay on top of patches
- Must be careful of permissions

Advantages of Linux

- Communication between remote linux boxes
- Eventual remote mapping of shared drives
- Remote administration
- Easy to edit/modify scripts
- ssh for security
- Techs are results–oriented

Cool Linux Example 1

Problem: viruses

Solution:

- Found email virus scanning software (Amavis)
- Amavis authors fixed some bugs
- Real Time modified existing sendmail config
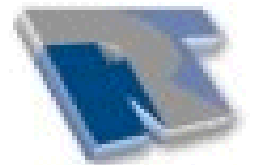- Virus scanning in place with McAfee .dat files

Cool Linux Example 2

Problem: need help with samba

Solution:

- Went to samba.org site to find consultant
- Found consultant in Iowa City
- Within 2 hours had samba configured

Questions

???

Page 21