

Price Comparison of

Linux vs NT

for a database backend—dynamic web site

Because Real Time uses open source sources, in particular Linux, many clients ask us, "Why use linux?" or "Why aren't you using Microsoft solutions?" There are many reasons to use Linux, but the point that seems to make the most impact with clients is cost.

This is whitepaper to document the cost savings of using open source tools from the hardware up to deploy a web site that uses a database backend and dynamic content.

This whitepaper is short, but it was still difficult to write. Reading and understanding the Microsoft End User License Agreement (EULA) is extremely difficult. Searching Microsoft's web site (<http://www.microsoft.com>) turned up some information. I have included the links below:

- <http://www.microsoft.com/MidAtlantic/licensing/basics.htm>
- <http://www.microsoft.com/SouthWest/licensing/default.htm>
- <http://www.microsoft.com/PIRACY/atrisk/faq/default.asp>
- <http://www.microsoft.com/DirectAccess/Products/CRK/SMIndex/SMFAQ.asp>

Pricing was obtained 18–Oct–2000 from CDW (<http://www.cdw.com>). Real Time is a reseller, so the pricing may be different than what you find on the street.

Here are my assumptions:

1. That NT and Windows 2000 treat http requests as anonymous users, so an Internet connector and unlimited user licenses are not necessary.
2. That the entry level licenses for NT (5–user), Windows 2000 (5–user) and SQL Server (25–user) will allow you to run a heavily used web site without purchasing additional user licenses
3. The same hardware that will run NT and Windows 2000 can run Linux.

4. The above assumptions are wrong and I should include pricing for unlimited user licenses for SQL Server with 1 Internet Connector.

I make the last point because I found documentation that leads me to believe that anonymous access to NT and Windows 2000 does not count as a user. Only authenticated users require a CAL. But I could not find a statement pertaining to SQL Server.

I would be very interested to hear from someone who can answer some of my licensing questions. I have tried in vain to contact Microsoft directly.

With the above assumptions stated, lets proceed to the costs.

Operating System Costs

	Users	Min RAM	Recmd RAM	CPU	Min Disk	Recmd Disk	Cost (list)
Redhat 6.2	Unlimited	16Mb	64Mb	i386	120Mb	500Mb	\$0.00
NT 4.0	5	64Mb	128Mb	P90Mhz	500Mb	1Gb	\$687.30
NT 4.0	25	64Mb	128Mb	P90Mhz	500Mb	1Gb	\$3,006.58
Windows2000	5	128Mb	256Mb	P133Mhz	1Gb	2Gb	\$855.73
Windows2000	25	128Mb	256Mb	P133Mhz	1Gb	2Gb	\$3,391.82

Summary:

- Using the same hardware and running Window NT 5–user will cost you a minimum of \$687 more for each box.
- Using the same hardware and running Windows 2000 5–user will cost you a minimum of \$855 more for each box.

For clients on a really tight budget, you can see from the minimal requirements that Linux will run a less powerful box. There is a potential savings on hardware costs as well.

Database Costs

	Users	Cost (list)
MySQL	Unlimited	\$0.00
Postgres	Unlimited	\$0.00
Access	Unlimited	\$298.92
SQL Server + 1 Internet Connector	25	\$9,485.77
SQL Server + 1 Internet Connector	Unlimited	\$30,054.73
internet connector		\$2,814.85

Summary:

- Using the same hardware and running SQL Server 25–user will cost you a minimum of \$9,485.77.
- If an Internet Connector is not need, you will still spend \$6,671.
- Microsoft states Access is a single user database and is not recommended as the Back Office solution for web site. But I included the price for comparison.

Conclusions:

- Using the least expensive Microsoft solutions
NT 4.0 (5–user) (\$687)
SQL Server 7.0 (25–user) no Internet Connector (\$6,671).
Will cost your client \$7,358 more then a comparable Linux solution.
- The minimal hardware necessary to run Linux will work for clients on very tight budgets.