

**Cost of Ownership Analysis**

**NEON**

**vs.**

**Lotus Notes and MS Exchange**

**Nexus**



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**For more information concerning this report, including the opportunity of discussing how the Neon solutions can integrate with your current environment, please contact us.**

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## Summary

**NEON offers a Total Cost of Ownership of around £100 per user per year less than either Lotus Notes or Microsoft Exchange.**

## Introduction

Microsoft Exchange and Lotus Notes are probably the most widely deployed email systems in corporate Europe, at least in terms of seats installed in the last two to three years. It is open to debate as to why this should be. In this paper we examine, from a total cost point of view, Microsoft Exchange, Lotus Notes and Nexus' NEON. NEON is the result of developments and enhancements made to MEMO, the product which Nexus acquired from Verimation in 2000. Developed originally in 1984, MEMO was, for many years the de facto standard in corporate messaging. MEMO users are large corporations, and today there are about 3,000,000 users worldwide. Whilst MEMO's IBM mainframe technology still provides the basic engine, thus guaranteeing reliability and scalability, NEON adds the full functionality required by a modern messaging environment running on open platforms like Linux, USS and UNIX.

It can be argued that a simple cost analysis avoids the issues, as it does not assess the value that one system or another can add to an organisation. However, it is probable that in most cases the supposed added value is potentially and possibly, rather than actually, realised. Attempts to utilise the added value bring, in turn, greatly increased costs. In practice, too, research indicates that the overwhelming usage (85% or more) of even advanced groupware products such as Notes is simply for email.

A December 1997 report by the Gartner Group classifies Novell Groupwise and Microsoft Exchange as offering Simple Office Automation; email with some calendaring and group scheduling. NEON offers email (including rich text support), shared calendaring, group scheduling, workflow functionality, support for Windows clients, Web access and LDAP/SMTP/POP3/IMAP4 support. As such it satisfies the requirements of more than 85% of users within a large corporation. Nevertheless there are likely to be occasions when certain facilities within Exchange or Notes are required by knowledge workers. NEON is designed to run in tandem with these environments, communicating seamlessly when required.

In 2001 The Radicati Group, sponsored equally by IBM and Microsoft, published a comparison of the Total Cost of Ownership (TCO) between MS Exchange and Lotus Notes. This document compares the published Radicati figures with our own researched figures.

## Basis of Cost Comparisons

The sheer weight of numbers in favour of Exchange and Notes means it is imperative that any cost comparisons be credible, so we have tried to err in favour of Exchange/Notes. Some of the costs associated with NEON used in the calculations that follow are, we believe, on the high side.

There are also areas where we believe the hard-to-quantify costs lean heavily in favour of NEON, but we have not even attempted to quantify them. Examples are:

- *24 x 7 operation with extremely high availability and reliability:* Since NEON uses the MEMO mainframe engine, it is running on hardware that is designed to be highly available, delivering levels of reliability unheard of in the Intel PC/Windows/Unix worlds. There is clearly a cost associated with system downtime, particularly as more functions (such as scheduling and workflow) are committed to the system.
- *Centralised management, storage and backup:* Decentralisation brings with it overheads in replication and synchronisation that consume LAN and WAN bandwidth, slow other systems down, create windows of out-of-synch states, and introduce the possibility of inconsistent databases. In a large enterprise of national or international scope, often with extended hours of operation, these can be significant cost factors.
- *Costs of network and related infrastructure:* Deploying large numbers of PC servers to support thousands of users implies costs for networking equipment, from cabling through hubs and routers to computer rooms. These costs do not apply when adding an extra component to an existing mainframe infrastructure.
- *Cost of client PC hardware:* The resource requirements on the client PC of the Exchange or Notes client can be considerable.
- *Rapid changes in the underlying hardware and software technology:* The constant evolution in operating systems and Intel architecture means systems often need to be replaced and upgraded whether you like it or not. Older versions of Windows are no longer available or supported, nor are the applications that ran on them. Complete upheavals and the need to learn afresh the necessary skills to support the current versions mean constant training, learning by mistakes, and battles to retain skilled personnel.

So what is the basis for comparing costs?

We have taken as a model an enterprise providing email, calendar, and group scheduling services to a user base of 20,000 users. (Note that NEON includes workflow functions as standard).

Included in the NEON costs are mainframe and OS/390 acquisition and maintenance costs to support the user base.

**Table 1 summarises the enterprise environment resulting from the Radicati survey. We have added the NEON column from our research.**

	<b>Lotus Notes</b>	<b>MS Exchange</b>	<b>NEON</b>
<b>Hardware Platform</b>	Compaq Proliant 6500, 3000, 2500; Sun Solaris E4500; IBM RS6000	Compaq Proliant 6500; IBM Netfinity 7600, Dell	IBM 390 Series OS/390
<b>Average # of Users</b>	17040	18140	19866
<b>Average # of Servers</b>	55	53	2.5†
<b>Average # users/server</b>	148	342	10283
<b>Average max # users/server</b>	1140	3410	14467
<b>% of remote users</b>	16%	42%	11%
<b>Directory services in use</b>	Notes	MS Active Directory	MEMO, LDAP
<b>Average # of gateways</b>	4	22	2
<b>Full-time Admin Staff</b>	7.2	3.9	1.7
<b>Help-desk Staff</b>	5.8	17.3	2.25

**Table 1 – Enterprise Environment Comparison**

† All MEMO Servers run in 1 physical Machine, in most cases in one Logical partition (LPAR) within the physical machine.

**Table 2 below shows the figures as supplied in the Radicati report.**

<b>Ave Costs/User/Year</b>	<b>Lotus Notes</b>	<b>MS Exchange</b>
Acquisition	\$ 145.93	\$ 148.40
Maintenance	\$ 29.43	\$ 32.72
Installation & Configuration	\$ 17.94	\$ 41.15
Administration	\$ 93.04	\$ 25.54
Downtime	\$ 20.73	\$ 69.72
1st Year Training	\$ 1.39	\$ 0.70
Follow-on Year Training	\$ 0.77	\$ 0.42
<b>TCO - 1st Year</b>	<b>\$ 279.03</b>	<b>\$ 285.51</b>
<b>TCO - 3 Year Average</b>	<b>\$ 220.84</b>	<b>\$ 217.93</b>

**Table 2 - The Radicati Enterprise TCO Summary**

In Table 3 below we have attempted to bring the costs that are affected by salaries in the Radicati report into line with European salaries. Radicati work on the following salary (total cost to company) assumptions:

Messaging Administrator - \$120,000 pa; Help-desk Staff - \$70,000 pa;

Typical User - \$60,000 pa

We have halved these numbers to bring them more into line with local conditions. We have also converted the currency used by Radicati from US Dollars to Euros at an exchange rate of \$1=€1

<b>Ave Costs/User/Year</b>	<b>Lotus Notes</b>	<b>MS Exchange</b>
Acquisition	€ 145.93	€ 148.40
Maintenance	€ 29.43	€ 32.72
Installation & Configuration	€ 8.97	€ 20.58
Administration	€ 46.52	€ 12.77
Downtime	€ 10.37	€ 34.86
1st Year Training	€ 1.39	€ 0.70
Follow-on Year Training	€ 0.77	€ 0.42
<b>TCO - 1st Year</b>	<b>€ 213.18</b>	<b>€ 217.31</b>
<b>TCO - 3 Year Average</b>	<b>€ 154.55</b>	<b>€ 149.69</b>

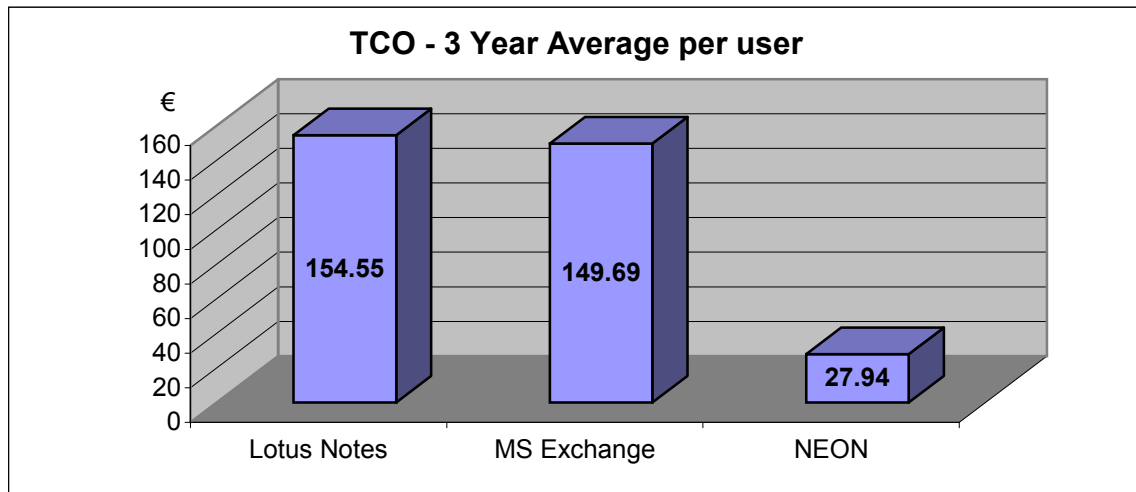
**Table 3 – Radicati report adjusted to European salary levels**

**Table 4 and Figure 1 show the TCO comparison between MS Exchange, Lotus Notes and NEON.**

Ave Costs/User/Year	Lotus Notes	MS Exchange	NEON
Acquisition	€ 145.93	€ 148.40	€ 35.50
Maintenance	€ 29.43	€ 32.72	€ 5.33
Installation & Configuration	€ 8.97	€ 20.58	€ 3.73
Administration	€ 46.52	€ 12.77	€ 4.05
Downtime	€ 10.37	€ 34.86	€ 4.12
1st Year Training	€ 1.39	€ 0.70	€ 0.77
Follow-on Year Training	€ 0.77	€ 0.42	€ 0.60
<b>TCO - 1st Year</b>	<b>€ 213.18</b>	<b>€ 217.31</b>	<b>€ 48.17</b>
<b>TCO - 3 Year Average</b>	<b>€ 154.55</b>	<b>€ 149.69</b>	<b>€ 27.94</b>
<b>NEON TCO as % of Notes/Exchange</b>	<b>18.08%</b>	<b>18.66%</b>	
<b>NEON savings/user/year</b>	<b>€126.61</b>	<b>€121.75</b>	

**Table 4 - TCO comparison**

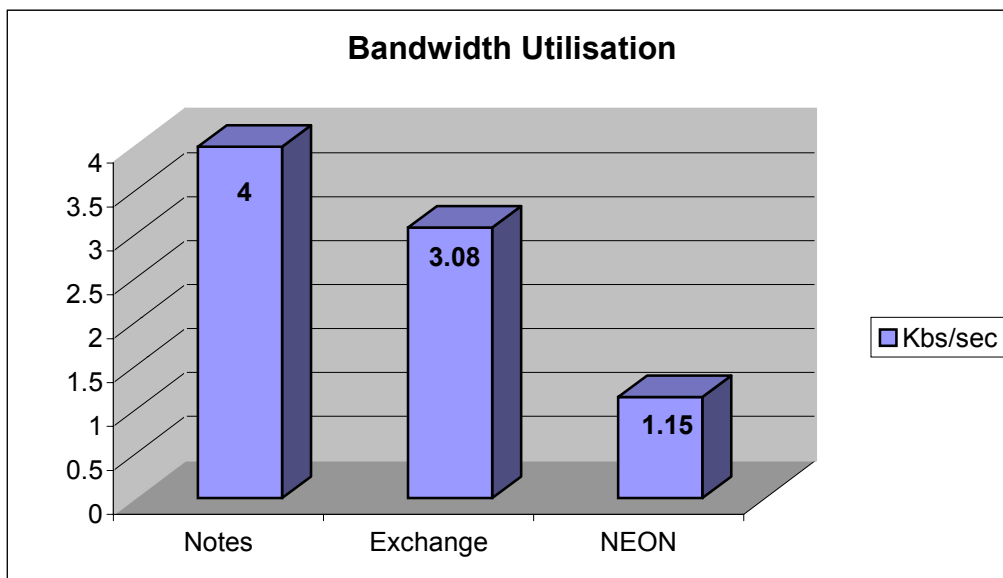
Depending on how we adjust the salary ratios to local conditions, the NEON TCO varies between **10%** and **20%** of the TCO of Notes or Exchange. The salary ratio in Table 4 is adjusted to European conditions.



**Figure 1 – TCO Comparison per year and user**

## Bandwidth Utilisation

Another cost factor that is more often than not overlooked is network bandwidth costs. In the USA bandwidth is cheap (but costs are currently unknown to us), and in Europe it appears to differ a lot between the various countries. Swedish costs are approximately 2,500 SEK/ month (approximately €270) for a 128Kbs line.



**Figure 2 – Bandwidth Utilisation Comparison**

The numbers shown in Figure 1 were sourced as follows:

### Lotus Notes

- Various Domino/Notes discussion threads
- Presentations at Lotusphere

### MS Exchange

- Documentation provided by Microsoft

### NEON

- Documentation provided by Nexus
- Our own testing at local customer sites

The tests used the native client for each system i.e. Notes client for Notes, Outlook 2000 for Exchange and NEON Open Client for NEON.

Clearly, using NEON will result in significantly less bandwidth requirements than either Notes or Exchange.

In practice the NEON cost savings could actually exceed any other cost savings discussed in this document. For example, a 128Kbs line would support (assuming it did nothing else) 32 Notes users, 41 Exchange users or 111 NEON users.

Table 5 shows the bandwidth cost per user – monthly and annually.

	Lotus Notes	MS Exchange	NEON
No of users	32.00	41.56	111.30
Cost/user/month	€ 8.40	€ 6.47	€ 2.43
<b>Cost/user/year</b>	<b>€ 100.80</b>	<b>€ 77.60</b>	<b>€ 29.16</b>

Table 5 – Bandwidth Cost Comparison

As mentioned above, the bandwidth cost savings when running NEON could be significant and if putting the cost per user for the product and bandwidth together the total cost would be as shown in Table 6 and Figure 3 below.

Ave Costs/User/Year	Lotus Notes	MS Exchange	NEON
Bandwidth	€ 100.80	€ 77.60	€ 29.16
Product TCO	€ 154.55	€ 149.69	€ 27.94
<b>Total</b>	<b>€ 255.35</b>	<b>€ 227.29</b>	<b>€ 57.10</b>
<b>NEON savings/user/year</b>	<b>€198.25</b>	<b>€170.19</b>	

Table 6 – Annual Bandwidth Costs vs. Product Costs

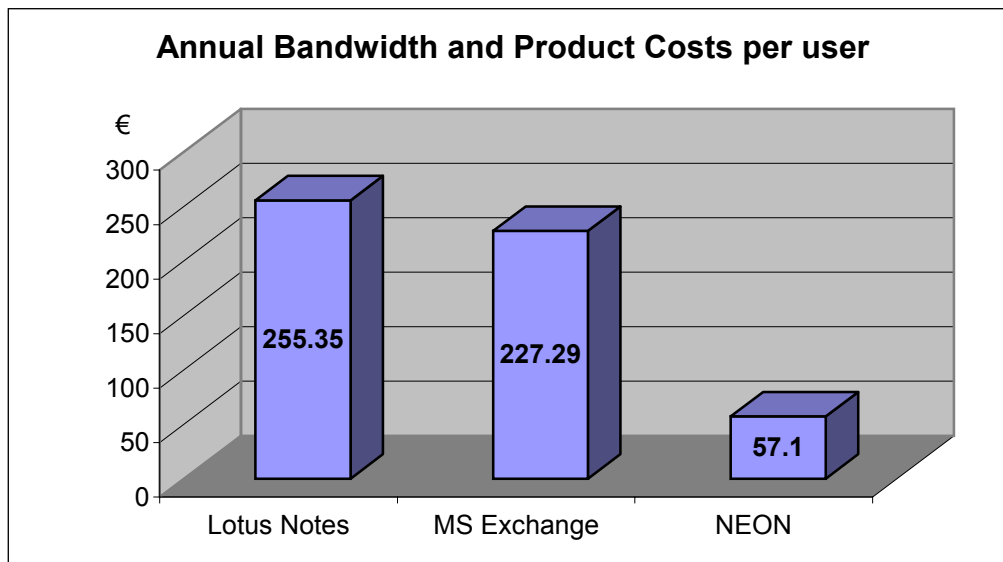


Figure 3 – Bandwidth and product TCO costs per year and user

## **Conclusions**

This document has shown unequivocally that for those organisations seriously looking to achieve lower cost of ownership for messaging, NEON is the strongest contender available today; but it is not only base costs where NEON occupies the high ground:

### **Compatibility**

For over 17 years, the MEMO product family has provided secure, reliable and cost-effective service to some of the world's largest organisations. Whether handling Business e-mail, Enterprise-wide calendar, or acting as a backbone for other processes, MEMO is always there when you need it. During this time every new release, including NEON, has been compatible with its predecessor. Users have never been forced to convert to some new system every few years, unlike our competitors. In fact, if you had been a MEMO user 17 years ago, you would still be able to read messages created then with NEON today.

### **Availability**

NEON has the highest availability factor in its class. While many of our competitors, by their own admission, are satisfied with 93% availability, we believe that four weeks scheduled downtime each year is too much to ask. We see 99.9%+ availability as a must for Business Messaging.

### **Scalability**

Scalability has always been a MEMO, and thus a NEON strength. Within a few hours from start of installation, tens of thousands of your users could be using NEON.

### **Ease of administration**

Ease of administration means less staff needed for administration and maintenance. Centralised data storage eases capacity planning, reduces network traffic caused by data replication common in other systems, and facilitates automated backup procedures.

### **Security**

Security means less downtime due to virus attacks and the necessary cleanup. It also means no time wasted waiting for the system to come up.

### **Our commitments to you are these:**

We will continue to develop the NEON concept based on market requirements. The NEON family of products will continue to play an important and strategic role in your organisation's communications in the 21st century.

We are committed to ongoing enhancements and development of all components of the NEON system.

We are committed to open standards.

We are committed to continued leadership in security, especially as it pertains to secured messaging.

We are committed to providing cost-effective solutions for all your Business Messaging needs.