

White Paper

email in a box

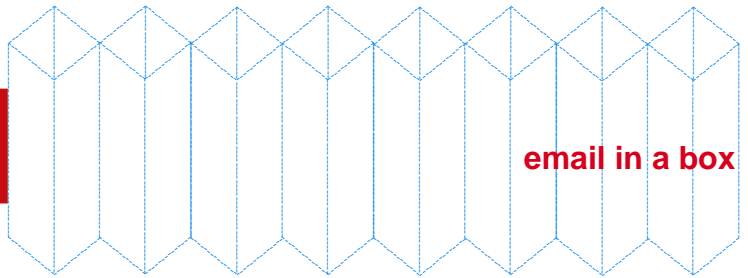


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secured messaging solutions for business



Neon in a Box

Who are we?

NexusNeon are the sole distributors of the Memo and Neon suite of email and messaging applications in the UK and Ireland.

We represent Technology Nexus AB, a Swedish Plc who are the owners and developers of the Memo and Neon suite of email and messaging applications.

We offer Sales, Installation, Configuration, Support and Consultancy on a range of email and complementary products.

The Product

Neon in a Box is a fully managed, turnkey, email/messaging solution that offers unparalleled benefits in the areas of Security, Reliability, Availability, Accessibility and Total Cost of Ownership.

Neon in a Box has evolved from a long established, tried and tested, mainframe based email/messaging solution that has been in use by major corporations for many years.

Thanks to modern technology it is no longer necessary for Neon users to have a mainframe computer. Neon in a Box is now available on an Intel platform – a more cost-effective solution for the medium to large user.

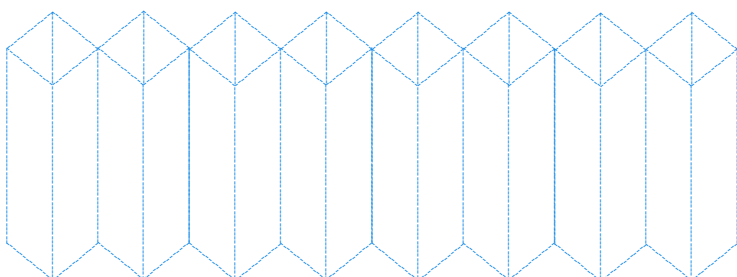
Background

Neon in a Box has evolved from one of the first email systems to introduce the concept of global communication. This was called Memo, and originally developed by Volvo in Sweden. It quickly became the accepted email and messaging system for very large companies. With the assistance of a pre-existing network from Swedish Post, most of the large organisations in Sweden connected their Memo systems together. Soon Memo terminals appeared in post offices and airport lounges across Sweden. In this way anyone who was a member of the network could visit one of these terminals and send and receive emails to anyone within the network. Whilst this might seem primitive by today's standards, remember we are talking about almost a quarter of a century ago. At the same time the rest of Europe and the US were starting to discover Memo, and it was being adopted by major corporations throughout these regions as their email platform. Memo users can be found in all European countries, as well as the Far East, Australia, South Africa and South America.

The Evolution

As time, the Internet and people's expectations developed, so did Memo. In 2000 Technology Nexus AB, its current owner, decided to rationalise Memo's design by maintaining its core services on the IBM z/OS platform and by porting and further developing the components needed to co-exist in the Internet world onto the emerging Linux platform. They called the project Neon.

Security, file IO and data management takes place on the z/OS platform, whilst compliance to open standards such as SMTP, MIME, UNICODE, iCAL, WEB and POP3 take place in Linux. Communication between the two environments is handled by an internal Nexus protocol called MDP (message distribution protocol) running on top of TCP/IP. MDP was specifically developed to be both efficient and secure and is common to all of the components of the Neon solution.



Platform Utilisation

Neon Base performs all of the interaction with z/OS to take full advantage of the reliability, accessibility, security and serviceability traditionally offered by that platform. It interacts with packages such as RACF to maintain the highest standard of security. By making direct IO calls it maintains fast throughput by taking full advantage of the channel attached DASD. This also provides the reliability that z/OS users have come to expect.

More recent standards are better served by the Linux environment. Neon places components that depend on these standards into Linux, thereby taking best advantage of both worlds.

FLEX/ES

Because of a dependency on IBM's z/OS all these advantages have, until now, been limited to the very large corporations that run IBM Mainframes. However things have changed. IBM are now licensing their z/Series software to run an IBM approved z/Architecture™ and System/390 emulator called FLEX-ES from Fundamental Software Inc (www.funsoft.com)

Advantages

Intel Platform

Since the Neon solution will now run on an Intel platform, more specifically the IBM xSeries server, this brings the reliability, scalability, flexibility and security of Neon to a much wider market segment.

z/VM

Because we can now offer z/Series on the Intel platform we can take full advantage of all that this architecture has to offer. For example, by running z/VM under FLEX/ES we can start two virtual machines; one to run the z/OS components of Neon in a z/OS virtual machine, the other to run the Linux components in a z/Linux virtual machine. Because of the efficiency of Neon many thousands of users can be supported on a single xSeries server.

Storage

It is recognized that one of the main limiting factors in a MS Exchange implementation is the amount of user data a single server can manage (16GB on Exchange 2003). FLEX/ES has access to 690GB of internal storage and an almost unlimited capacity externally. Even after the operating system has taken its share there is more than enough left for Neon in a Box. All the user's storage is managed internally by Neon and accessed using BDAM, a time honoured and respected method of accessing z/OS data efficiently. It is not unusual to see one Neon server manage in excess of 180GB of user storage.

Security

Security is a major concern to all responsible directors and managers. Neon has never been compromised, nor are there any known exploits against it. It runs on the world's most secure platform (IBM z/OS). In addition to this it uses an authentication method similar in operation to IBM's RACF and can interface with the most common security packages on the IBM zSeries platform. Another feature of Neon in a Box is that it stores all its user data in an encrypted format. It does this with an algorithm that has never been cracked nor reverse engineered. Furthermore it is not possible for anyone, not even an administrator, to look at someone else's mailbox without their knowledge.

Total Cost of Ownership

Maintenance and Administration

Two of the major elements that contribute to the TCO of any IT solution are the costs of maintenance and administration. For Microsoft Exchange The Radicati Group, in its November 2003 report "Microsoft Exchange 2003 Total Cost of Ownership", set this at \$42.21 per user per year. This is approximately £85,000 per year for 3,000 users. The annual cost for Neon in a Box comes out at about £68,000 for the same number of users.

Upgrades

Another major element to be considered are upgrade costs. Radicati, in their June 2004 report "IBM Lotus & Microsoft – Corporate Market Analysis", suggest that both these suppliers will have a radical upgrade programme over the next three years. They predict, in their 2003 report, that this will cost \$5.70 per user per year for an Exchange system. This represents £10,050 per year for 3000 users. NexusNeon do not envisage the need for any platform or operating system upgrades in the equivalent timeframe. The cost of any upgrades to the Neon system is included in the maintenance charges above.

Data

The same report also states that, at an average of 30MB of data per user, the cost of storage is \$10.50 per user per year or £18,540 for 3,000 users. This amount of storage can easily be support by just one Neon in a Box server and is included in the initial purchase fees

Downtime

Another area of cost highlighted in the report is downtime. This is estimated at \$36.81 per Exchange user per year. This is equivalent to £64,950 per year for 3,000 users. Current Neon users report (and expect) a 99.99% availability, with many not being able to recall their last unscheduled outage.

Fully Managed

NexusNeon appreciate that there are technologies involved in this solution that will be unfamiliar to its target customers. However they are confident in their assertion that the overhead involved in managing these systems is small. Therefore they are offering their expertise and resources to manage the solution on their customers' behalf. This can vary from a fully managed black box implementation, to sharing the administration and support with the customer in any way that best fits individual corporate requirements.

Client access

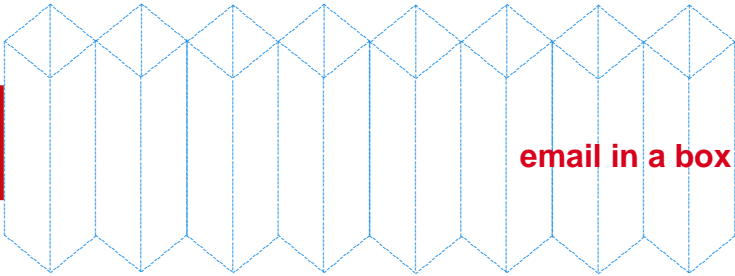
You can access your Neon in a Box email in any number of ways, though the proprietary Windows client gives the maximum functionality along with the best user experience. All of the same functionality is available in the Web client, although some of the presentation is unavoidably limited by the capabilities of the browser. Users are not restricted to using the NexusNeon clients. Compliance to open standards such as POP3, Imap, SMTP and iCAL means that users can use any client that utilises these standards. These include Microsoft Outlook or Outlook Express, Eudora, PDAs and mobile phones.

Coexistence

Because of its compliance with open standards, Neon in a Box can coexist with any similarly compliant email systems. These includes Lotus Notes/Domino and Microsoft Exchange/Outlook. The same open standards also make it easy for Neon to exist within the wider world of the Internet. Furthermore, by using Microsoft standards, the NexusNeon proprietary client can co-operate with all of a user's normal desk top applications. The Neon in a Box Web client is ideal for inclusion in any Intranet or portal environment.

Calendars

The Neon in a Box solution comes complete with a calendar system capable of supporting tens of thousands of users whilst maintaining the security, robustness, accessibility, availability and reliability of the email components. It provides meeting scheduling and personal time management and, because it is always online, everyone shares the same up-to-date information. And Neon complies with the iCAL standard, allowing users to share all of this functionality with any other iCAL compliant system.



Forms

The Neon Forms solution, included in the Neon in a Box offering, is a workflow and collaboration tool which fully integrates with a user's mailbox. All tasks that require attention appear in the mailbox along with normal mail, so users are immediately aware of them, and can choose for themselves when to handle each particular task.


Directory

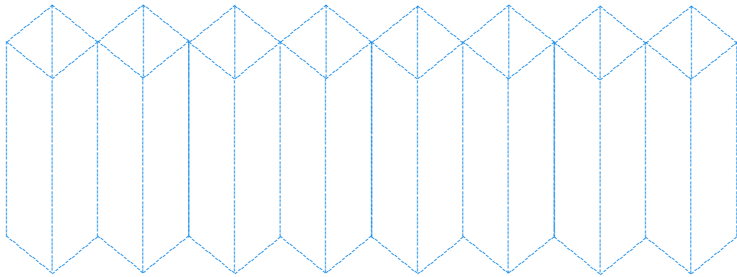
The Neon directory is stored in the z/OS managed storage for efficiency and speed of access. It is often used as the corporate directory since it can contain, in addition to email information, telephone numbers, physical addresses and much more. Neon in a Box is also LDAP compliant, so it can coexist with any other LDAP compliant directory service.

Conclusion

Neon in a Box delivers a secure email system, which has previously only been accessible to the very largest of corporations, to everyone. It has evolved in the very demanding environment of the financial, automotive and service industries, but now everyone can take full advantage of the inherent features and security that these industries expect. It is delivered in a fully supported IBM environment and benefits from all of the assurance that is associated with that. It complies with all the relevant standards to allow the maximum flexibility whilst fully protecting investments. Its Total Cost of Ownership benefits from a very low cost of maintenance and administration; it is possible for one person to handle all the tasks associated with delivering these to over 10,000 users.

The following chart is based on figures provided by The Radicati Group, in its November 2003 report "Microsoft Exchange 2003 Total Cost of Ownership" and are based on an exchange rate of £1=\$1.70

				Saving per year
	Per user per year	3,000 users		
Server & client maintenance cost	£8.72	£26,160.00		
Messaging server platform maintenance	£6.60	£19,800.00		
User Administration	£13.04	£39,120.00		
Total Admin support	£26.36	£85,080.00	£68,014.50	£17,065.50
Upgrades	£3.35	£10,050.00		£10,050.00
Storage	£6.18	£18,540.00		£18,540.00
Downtime	£21.65	£64,940.00		£64,940.00
Total	£59.54	£178,610.00	£68,014.50	£110,595.50
Total saving per year with Neon in a Box				£110,595.50



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