



## ***Stichting NLnet Labs* Annual Report 2000**

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## **Annual Report 2000 Stichting NLnet Labs**

### **1. Introduction**

NLnet Labs has been founded by Stichting NLnet to develop, implement and promote new protocols and applications for the Internet. It started its activities on January 1st, 2000 with two employees: Ted Lindgreen and Roy Arends.

The NLnet Labs offices are located on the Amsterdam Science Park (ASP) where traditionally most of the Internet developments in The Netherlands have taken place. The ASP is still very important for the Internet, as it is the location of the Amsterdam Internet Exchange (AMS-IX), in which vicinity many Internet companies can be found.

### **2. Activities of Stichting NLnet Labs in 2000**

#### **2.1 Staff**

The goal of NLnet Labs is to contribute knowledge to the Internet. This can be achieved by doing development, but also by educating people to develop software elsewhere. The budget of NLnet Labs is based on long term (15 years) development with up to six people. The initial goal was to hire three people (including the managing director) before the end of 2000. During the year 2000 it became clear that it was difficult to find people with the skills NLnet Labs needs. Miek Gieben was an exception, and started in June. However, in November, Roy Arends left to start work for Nominum where he continues to work on DNS development.

#### **2.2 Projects**

NLnet Labs had planned to start with development of fundamental, low level, issues of the Internet Protocol. There were two reasons for this: in the opinion of both the Board and the managing director, there is currently too little progress on the lower level, and second, the development of higher level protocols would require other skills than presently available within NLnet Labs.

One of the lower level protocols that is of special interest is DNSSEC. The current Domain Name System (DNS) works very well and highly efficiently, but lacks security. This problem was first noticed back in 1990, but it took until 1995 before this became a widely known issue. It took until 1999 before a workable proposed standard (RFC 2535) was completed. However, much concern remained, as to whether the proposed standard could be employed in real life, especially by large top-level domains (TLDs).

NLnet Labs started investigating the implementation problems of DNSSEC in a CENTR (Council Of European National Top-Level Domain Registries) working group with active participation by the registries for the .nl, the .de and the .se TLDs.

One of the first things that was discovered, was that the requirements on CPU power, memory, I/O throughput, etc., needed to sign very large zone-files (.nl had at that time

about half a million, .de 5 million, and .com some 25 million delegations) could be met with off the shelf available PC hardware. Many had feared for signing sessions of weeks even with the largest systems currently available. This result was presented at various meetings and conferences (SANE, NLUUG, IETF, RIPE, CENTR), and caused the large TLDs to regain interest in DNSSEC.

Next focus was on the operational issues that large TLDs will be faced with when implementing DNSSEC. Again, the results were presented at various meetings, and also published in a science report at the KUN (Katholieke Universiteit Nijmegen).

The software used to test DNSSEC operations is BIND, versions 8 and 9. The development of this software is co-ordinated by ISC (Internet Software Consortium) and its implementation subcontracted to Nominum.

### **2.3 Plans for 2001**

In 2001 NLnet Labs plans to continue the DNSSEC development. Especially designing and implementing secure aware resolver software, which is currently still non-existing, but badly needed to test the DNSSEC operations.

Finding skilled developers will most likely become less difficult in the course of 2001 due to demise of the internet hype. When more developers have been found, work on IPv6 will progress. Implementing this next generation IP protocol is needed to overcome a number of bottlenecks the Internet is currently facing. The most notable bottleneck is the lack of address space. Further projects to be started in 2001 are testing GLOBE (an NLnet-VU development) and perhaps developing geographical-GPS software.

### **2.4 More information**

More information on past, current and planned projects can be found at:

<http://www.nlnetlabs.nl>

## **3. Organisation**

Stichting NLnet Labs was founded on December 28, 1999 by Stichting NLnet. Its Board consists of three members:

<i>name</i>	<i>function</i>
Teus Hagen	chairman
Frances Brazier	secretary
Wytze van der Raay	treasurer

During the first year, 2000, 8 Board meetings took place:

<i>date</i>	<i>place</i>
January 5, 2000	Amerongen
February 9, 2000	Amsterdam
March 8, 2000	Amsterdam
April 26, 2000	Amsterdam
May 31, 2000	Amerongen
August 9, 2000	Amsterdam
September 27, 2000	Amsterdam
November 22, 2000	Amsterdam

During the first Board meeting, Ted Lindgreen was appointed managing director of Stichting NLnet Labs, starting January 1, 2000. He is responsible for the daily management of all activities of the Open Source network software development laboratory, including development of strategies and plans for new activities.

Two staff members worked for NLnet Labs in 2000:

- Roy Arends, from January 1, 2000 until November 1, 2000
- Miek Gieben, from June 1, 2000 (still employed)

NLnet Labs rents office space in the Matrix I building in the Amsterdam Science Park in Amsterdam, very close to one of the most important internet interconnection centres in Europe.

## **4. Finances**

Stichting NLnet Labs primarily finances its projects and activities from grants obtained from its parent organisation Stichting NLnet. In addition, income may be obtained by providing Open Source internet based consultancy and/or programming services to third parties, but this was not the case in 2000.

### **4.1 Fiscal status**

Stichting NLnet Labs has been set up as a non-profit organisation, with general benefit objectives. Its request to be classified as an entity with general benefit objectives within the meaning of the Successiewet 1956 (article 24 sub 4) has been granted by the Dutch tax office (department *Registratie en Successie*) on February 2, 2000. Due to this status, Stichting NLnet Labs can receive grants from Stichting NLnet (with the same general benefit objective classification) without considerable tax consequences.

Because Stichting NLnet Labs may provide consultancy and/or development services based on its Open Source and internet expertise, to commercial third parties, it has also applied for registration as a Value Added Tax-registered entity. This registration has been provisionally provided by the tax inspection on March 15, 2000.

Based on its non-profit status, Stichting NLnet Labs does not expect to become subject to

company tax (*vennootschapsbelasting* in Dutch).

Since Stichting NLnet Labs employs staff, it has been registered for Social Security insurances with GAK Nederland BV, in the sector commercial services II (BV 25).

## **4.2 Administration**

Since January 1, 2000, the books are kept by the treasurer using the Exact Compact for Windows software package. The administration is completely based on the euro rather than the guilder as its base currency, to bypass the need for a large-scale conversion somewhere between now and January 1, 2002. Unfortunately, not all third parties with which Stichting NLnet Labs maintains financial relationships, are equally capable of dealing with the euro (most notably the GAK), therefore small-scale manual currency conversion calculations have been, and will be, a fact of life during 2000 and 2001.

The salary administration has been contracted out to the Salarisadviesgroep Rayon Centrum of PricewaterhouseCoopers. This group also prepares the salary tax forms.

PricewaterhouseCoopers Accountants has been charged with compiling and auditing Stichting NLnet Labs's Annual Accounts 2000. The accountancy report is a separate document with this Annual Report.

## **4.3 Income in 2000**

At the start of 2000, a budget was drawn up for the expected activities of NLnet Labs during the year, with a total of EUR 312.220. Based on this a grant was requested from Stichting NLnet for EUR 312.220 during 2000. Stichting NLnet has allocated these funds for 2000, to be received by NLnet Labs on a quarterly basis, i.e. EUR 78.055 in the first month of each quarter. In August 2000 it became clear that the level of activities, in particular the size of the employed staff, was falling behind the assumptions made in the initial budget. As a result the grant for the fourth quarter of 2000 was not needed. The net result of that is that Stichting NLnet Labs received a total of EUR 234.165 from Stichting NLnet during 2000.

There were some expectations about income from possible consulting activities in the DNSSEC area, but these did not materialize in 2000, so no consulting income was obtained.

The only other source of income during 2000 was interest derived from a savings account used to deposit funds temporarily. This amounted to EUR 2.309.

## **4.4 Expenditure in 2000**

The major expenditure categories of NLnet Labs in 2000 are summarised below (all amounts in EUR):

	<b>2000 actual</b>	<b>2000 budget</b>
Staff	141.758	202.097
Housing	15.041	17.867
Depreciation	3.614	27.460
Other costs	28.653	64.800
<b>Total</b>	<b>189.066</b>	<b>312.224</b>

#### **4.5 Budget for 2001**

The provisional budget for 2001 as approved by the Board in its meeting on November 22, 2000, is as follows (all amounts in EUR):

	<b>2001 budget</b>	<b>2000 actual</b>
Staff	199.000	141.758
Housing	18.209	15.041
Depreciation	10.332	3.614
Other costs	28.259	28.653
<b>Total</b>	<b>255.800</b>	<b>189.066</b>

Because NLnet Labs has built up a healthy financial reserve during 2000 (EUR 47.408), and because its costs are expected to increase gradually over the next year, depending on its success in hiring new staff, four quarterly grants for 2001 have been requested from Stichting NLnet, of respectively EUR 51.000, EUR 51.000, EUR 76.500 and EUR 76.500. The Stichting NLnet has approved these grants in January 2001, with the provision that the grant schedule may be revised if and when significant changes occur in NLnet Labs' staffing plan or significant income can be generated from e.g. consultancy services.