NameFLOW Status Report

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NameFLOW usage statistics 1

Number of DSAs

- Europe DSAs
- Rest of the world
- World DSAs

- May-91
- May-92
- May-93
- May-94
- May-95
- May-96
- Oct-97
- Jan-99
NameFLOW usage statistics 2

Number of Organisations

Europe Orgs
rest world
World Orgs
Root DSA transfer: time table

<table>
<thead>
<tr>
<th>Date</th>
<th>Event Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.9.98</td>
<td>Notification of NameFLOW customers</td>
</tr>
<tr>
<td>25.9.98</td>
<td>Planning meeting at ULCC</td>
</tr>
<tr>
<td>12.11.98</td>
<td>Transfer of the external hard disk</td>
</tr>
<tr>
<td>8.12.98</td>
<td>Root DSA running at DANTE</td>
</tr>
<tr>
<td>16.12.98</td>
<td>All scripts for monitoring and logging running</td>
</tr>
<tr>
<td>17.12.98</td>
<td>Posting to NameFLOW DSA managers</td>
</tr>
<tr>
<td>18.12.98</td>
<td>Second meeting at ULCC</td>
</tr>
<tr>
<td>19.12.98</td>
<td>Root DSA at ULCC set to read only</td>
</tr>
<tr>
<td>21.12.98</td>
<td>Report to NameFLOW customers</td>
</tr>
<tr>
<td>12.1.99</td>
<td>Root DSA at ULCC set to refuse binds</td>
</tr>
<tr>
<td>16.2.99</td>
<td>Root DSA at ULCC shut down</td>
</tr>
</tbody>
</table>
Root DSA transfer: Status

- New Quipu Root DSA @ DANTE
- currently on kappa.dante.org.uk, IP 193.63.211.34
- eventually on a Sun E 250 Enterprise server
- no second change of IP address
- Old Root DSA still running
- 7 FLDSA manager confirmed change
Transfer of the other services

• Statistic scripts
• Directory probes
• NameFLOW mailing lists (new names):
  • NameFLOW-Forum@Dante.org.uk
  • NameFLOW-Managers@Dante.org.uk
• FTP Information Server
  • Documents, minutes, reports, replication files, LDAP software, X.500 software
  • Mirrors of ftp.bull.com/pub/OSIdirectory and ftp.ema.org/pub/challenge
• NameFLOW helpdesk
Obsolete NameFLOW services

- Gopher information service
- Public DUA
- FTP mirror of ftp.surfnet.nl/mirror-archive/software/x500
New NameFLOW services

- FTP mirror of ftp://terminator.rs.itd.umich.edu/x500/
- Enhanced Web site
- Hybrid solution
- LDAP index
PGP Directory initiative: history

- Aug 1996 draft-ietf-asid-pgp-02.txt expired
- 1996 German initiative ambix-pgp @ Uni-Tuebingen
- Nov 1997 NAI PGP Certificate server uses LDAP
- Nov 1998 Start of pgp-directory @ DANTE *
- Dec 1998 openPGP meeting in Orlando

* to subscribe: pgp-directory-request@Dante.org.uk
archive at http://www.dante.net/np/listarchives/pgp
PGP directory: The Problem

- Several attributes are needed to store information
- One person can have several PGP keys
- One PGP key can have several UserIDs
PGP directory: 4 models

- **NAI**: 
  pgpUserID=xx, pgpCertID=yy, o=PGP KEYSPACE
- **Kurt**:  
  pgpKeyID, o=xx -> pgpUserID, o=yy
- **Peter**:  
  pgpKeyID, o=xx with multivalue attribute pgpUserID
- **David**:  
  Family of entries
- **Ed Reed**: ???
Hybrid solution architecture

- **root DSA**
  - **firstlevel DSA**
    - **org DSA**
      - **org DSA**
        - **org DSA**
      - **gateway**
    - **firstlevel DSA**
      - **org DSA**
      - **org DSA**
  - **firstlevel DSA**
    - **org DSA**
  - **org DSA**
  - **org DSA**

- DSA X.500 (93)
- DSA X.500 (88)
- DSA LDAP server
Hybrid solution architecture (cont.)

- Root DSA and first level DSAs single vendor X.500(93)
- Knowledge information includes LDAP servers
- LDAP servers connected via X.500-LDAP gateway
- Future: Integration of an indexing system
Hybrid solution: replication model 1

- **root DSA**
  - First shadow of c=x

- **firstlevel DSA**
  - Master of c=x

- **firstlevel DSA**
  - Secondary shadow of c=x

  ➔ DISP
Hybrid solution: replication model 2

1. Root DSA
2. First level DSA
3. Master of c=x
4. Shadow of c=x
5. Master of c=x'
6. DISP
7. LDIF
LDAP DIT

- Setting up a LDAP DIT via v3 referrals
- Draft-ietf-ldapext-referral-00.txt:
  - Superior reference
  - Unnamed reference (≈ nonspecific subordinate reference)
- Netscape Directory Server
  - “Smart Referrals”
DESIRE II

- Distributed Index system part of **DESIRE II** project
- **Development of a** European **Service for** Information on Research and Education
- European Union’s Telematics Applications Programme
- 10 European Partners
- Information discovery, integrated in a Web-centered model
- Integration of other distributed information services
- Metadata management
Distributed Index system

- Hierarchical topology
- LDAP v3 technology
- Managed by the server side
- Index server registration
- Subset of CIP
  - Dataset Identifier (DSI)
  - Base URI for generating referrals
- Usage of the Tagged Index Object (TIO)
  - Tag identifies common attributes of an entry
Index distribution

- Global index to country level
- Country index can be distributed downwards
- Transport via FTP

- C=GB
- C=NL
- C=SE
- O=X
- O=Y
- O=Z
Index query routing

1. Client searches local server
2. Client searches country level server (CLS)
3. CLS looks up country index
4. CLS looks up its copy of the global index
Details of the query routing

LDAPv3
Client
Search
request
LDAPv3
Indexserver
virtual db
backend
GET <url>
accept text/ldif
LDAP referral
Referral as ldif file
TIO Server
TIO
TIO
TIO
TIO
TIO
TIO
TIO
TIO
TIO
TIO
TIO
TIO
TIO
LDAP Crawler
 LDAP Server
HTTP
LDAP

LDAPv3
Indexserver

LDAPv3
Client