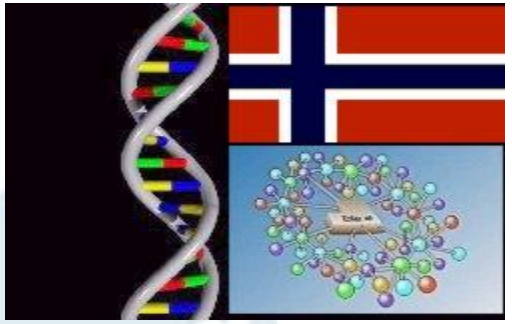

EMBnet facilities for life scientists

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Overview:

- EMBnet: what is it, activities and history
- The Norwegian EMBnet platform
- Practical demo of a few core applications
- Questions

What is EMBnet?

- An expanding international group of collaborating nodes providing biocomputing support to the Life Sciences.
- 34 national nodes provide bioinformatics support to local scientists.
- 9 specialist nodes provide expertise in highly specialised areas.
- Each country has a national node or a number of specialist nodes.

EMBnet Members

Argentina
Australia
Brasil
Canada
Chile
China
Colombia
Cuba
Denmark
Finland
France
Germany
Greece
Hungary
India
Ireland
Israel
Italy
Mexico
Netherlands
Norway
Poland
Portugal
Russia
Slovakia
South Africa
Spain
Sweden
Switzerland
UK

EBI
ETI
ICGEB
MIPS
UMBER
Hoffman-La Roche
LION Bioscience

EMBnet's activities

- Training and Education:EMBnet offers a panel of experts available to give specialized courses at their nodes.
- Software development: Staff from several EMBnet nodes collaborate in developing new biocomputing tools.
- Computing resources: Nodes provide their national scientific community with access to high performance computing resources, specialized databanks and up-to-date software.

EMBnet's activities (2):

- Technical support:Collaborative technical expertise within EMBnet provides support for sustaining the biocomputing facilities of the member nodes.
- Publications: The quarterly newsletter "embnet.news" presents the latest achievements inside the organization: http://www.embnet.org/EMBnet.news
- Quick guides:

  http://www.embnet.org/en/QuickGuides

EMBnet history:

- Founded in 1988 by representatives of EMBL, FR, NL, UK, and Hoffmann-La Roche, EMBnet is a collaborative effort to
  - increase the availability and accessibility of data resources and computing tools
  - increase knowledge and proficiency in bioinformatics through education and training
- Around the same time, the Norwegian EMBnet node was founded, first services were offered in 1993.

The Norwegian EMBnet platform

- 60 registered users
- public services (unregistered users)
  - FTP service: Download flat file databases

    ftp://ftp.no.embnet.org
  - MRS:Sequence retrieval mining tool:

    http://mrs.no.embnet.org/
  - NCBI BLAST interface:
    http://bioweb.uio.no/blast/blast.html
  - EMBOSS explorer web interface:

    http://cnkeeper.uio.no/

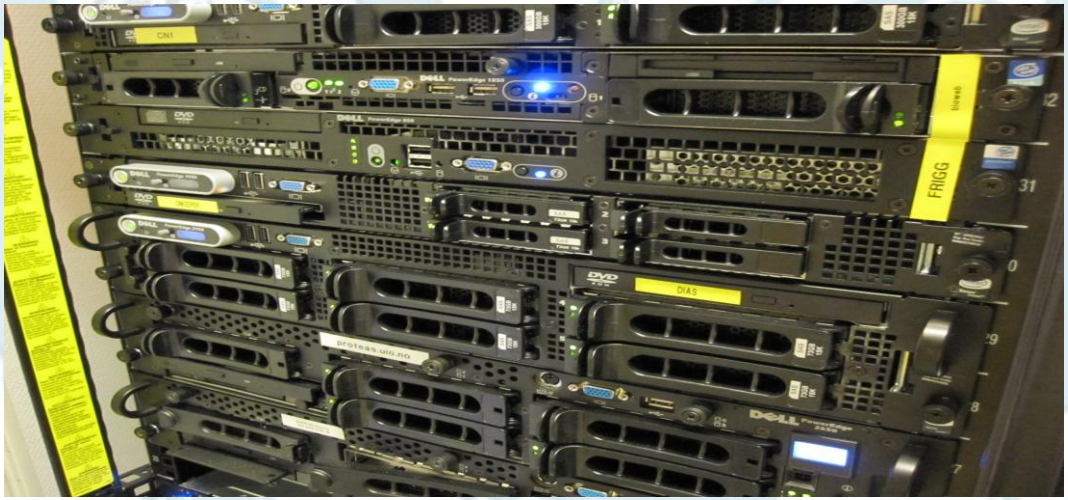
The Norwegian EMBnet platform(2)

- For registered users:
  - Command line access to EMBOSS/CCG
  - Dedicated 40 Gigabyte area for each user with daily backup
  - Access to large data sets (entire EMBL with meaningful subsets, Genbank and others)
  - Access to development tools (Perl, Python, C/C++, JAVA)

The Norwegian EMBnet Platform (3)

- For registered users:
  - Access to R + bioconductor modules
  - BioPERL
  - Access to large scale RDBMS systems (MySQL + Postgres)
  - Access to large filesystem storage (1-40 Tbytes)
  - EMBnet is a 14 Tbyte operation.

EMBnet Norway platform (4)



- 48 processing cores
- Computing nodes with 8,16,32 and 64 G of RAM
- 30 Tbytes of disk space

MRS sequence mining demo

- The search engine of biological sequences
- Mine sequences from different biological databases quickly and easily.
- Demonstrate binary operators to increase the search specificity.
- Show the embedded NCBI BLAST client

EMBOSS explorer demo

- How to search sequence sets and manipulate sequences

Command line EMBOSS and UNIX demo

- Demonstrate the power of a command line interface to
  - mine sequences
  - manipulate sequences
  - create BLAST and EMBOSS database subsets

EMBnet

For more information:

Visit us at:

http://www.no.embnet.org