Established 2007

OneLab

FUTURE INTERNET TESTBEDS

Developing and operating testbeds for the Future Internet

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OneLab’s offers:

For testbed users:
- **Testbed access**
  Carry out your networking experiments on OneLab’s federation of testbeds

For platform builders:
- **Testbed components**
  Build your own network-based platforms and testbeds using OneLab’s specialised building blocks

For testbed owners:
- **Testbed federation**
  Federate your testbed with the OneLab facility
Testbed access 1/4:

PlanetLab Europe testbed

- A world-wide platform for Internet developers
  www.onelab.eu/planetlab-europe
PlanetLab Europe testbed

PlanetLab nodes worldwide and (insert) PlanetLab nodes located within Europe
Testbed access 2/4:

- Wireless nodes in a real-life environment

www.onelab.eu/nitos
Location of NITOS nodes, including high-performance nodes (yellow) and diskless nodes (blue).
Testbed access 3/4:

- ETOMIC testbed
- High-precision active measurements, Europe-wide
  www.onelab.eu/etomic
ETOMIC testbed

Network delay tomography, showing delay estimates between different sites on the ETOMIC network.
Testbed access 4/4:

- DIMES testbed
  - Distributed topology measurement infrastructure
    www.onelab.eu/dimes
DIMES testbed

Number of DIMES agents per country in a week early in 2010.
Testbed components 1/5:

- PlanetLab software
  - Virtualized infrastructure management tool
    - [www.onelab.eu/planetlabsoftware](http://www.onelab.eu/planetlabsoftware)
Build a sliceable infrastructure with PlanetLab software.
Testbed components 2/5:

OMF software

- Control and management of networking testbeds
  www.onelab.eu/omf
OMF supports users over the full cycle of their experiments, from description to instrumentation, to execution and measurement collection and visualization.
Testbed components 3/5:

- Dummynet software
- Wireless emulation tool
  www.onelab.eu/dummynet
Dummynet software

An application of Dummynet in PlanetLab: different types of links emulated on top of physical links.
Testbed components 4/5:

- ANME box
  - Advanced network monitoring equipment
  - www.onelab.eu/anme
ANME box

ANME’s ARGOS measurement card.
Testbed components 5/5:

APE box

- Active probing equipment
  www.onelab.eu/ape
APE box

OneLab’s APE (Active Probing Equipment) box.
Testbed federation

OneLab federation

- Connecting testbeds
  www.onelab.eu/federation
OneLab’s worldwide federation of testbeds.
Onelab User’s (PLE only!)

**PLE testbed (wrt PLC)**

- Subscribed users PLE/PLC = 700/5332
- Users attached to currently active slices (not expired) PLE/PLC = 209/1680
- Users attached to slices that have run (used node resources) at least once the last month PLE/PLC = 158/842
Incentivize the utilization

- Disseminate
- Lower the entry cost
  - Easy to run environment
  - Easy to collect/understand results
  - Provide scenario & evidence of interest
- Broader the scope
- Enforce reliability
- On-Demand
Further information:

www.onelab.eu
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