OFELIA Facility Becoming Operational

The OFELIA project builds a Pan-European testbed facility for the research community to conduct experiments in an OpenFlow-enabled wide-area network.

Now the facility's initial set-up phase is coming to its end and users can start experimenting. The first public service offering is planned for July 2011.

The usage of the OFELIA facility will be provided "as is" as a free-of-charge best-effort service. Any user accepting the usage policy is welcome to experiment on the OpenFlow-enabled testbed.

Continuous Enhancements For A Great Variety Of Experiments

OpenFlow has opened and stimulated development of new Internet protocols and architectures. The five OFELIA core islands offer different views on OpenFlow related research. Moving research results from idea to prototype and from academia to industry requires additional steps like functional and performance testing of new architectures, software and hardware.

UEssex and ADVA optical have started their collaboration on integration of optical networking equipment and OpenFlow. At IBBT, a first version of the OFELIA control framework allows access to the w-iLab.t architecture enabling wireless research in the context of OpenFlow.

A note to our readers

OFELIA is publishing its project newsletter on a quarterly basis. Interested readers may subscribe to have new issues emailed to them. Also there are news feeds available informing about several topics in the project. Subscriptions to these services can be done via the OFELIA website: http://www.fp7-ofelia.eu/subscriptions/.

First OFELIA Open Call Successful

The first OFELIA open call asked for proposals to extend and enable advanced use and experimentation of the OFELIA pan-European experimental facility based on the OpenFlow technology.

21 proposals were submitted to the OFELIA open call for 4.8 million Euros (3.5 million Euros requested funding). The proposals came from 9 different member states of the EU (mainly Germany, Greece, and Italy), and from Norway, Turkey, Israel, China. The call was ten times overbooked in terms of available funding.

The proposals had to address at least one of the following three areas:

(a) extension of the existing experimental facility,

(b) measurement and evaluation, and ...

(c) functional enhancement of the experimental facility for experiments.

The evaluation of proposals in cooperation with the European Commission and the integration of the winning proposals as new partners in OFELIA are currently ongoing. The results will be published soon.

The project coordinator Hagen Woesner said: "We think of what to do with the proposals that we cannot accept this time, because we have a general interest of growing a community around OFELIA as well as the technical interest of seeing your brilliant ideas run on OFELIA. We are organizing a

workshop on 18th September 2011 in conjunction with the ECOC 2011 conference to give all the excellent proposals, that can't be supported by the first open call directly, the opportunity to present their ideas."

OFELIA Control Framework Software Released

For automated management of the OFELIA facility, a control framework is needed.

The first version was released in April. The control framework software is based on the expedient framework developed by Stanford University.

Currently, all OFELIA partners are extensively testing the control framework software and working towards the next improved version. This second version, expected to be finalized in June, will fix bugs that have been identified and also make new features available. The new features include better management of virtual machines in XEN based server environments, improved address management and allocation, and enhancements to the graphical user interface using AJAX technology for real-time resource status monitoring.

The goal is to have an OFELIA control framework that is a stable and mature experimentation environment.

Highlights From OFELIA Islands

At ETH Zurich (http://www.ethz.ch) three new powerful servers are integrated to the Zurich OFELIA Island that are capable of hosting various simultaneous experiments. The servers will also provide a perfect environment for conducting performance tests for single experiments.

To the Barcelona island's hardware at I2CAT (http://www.i2cat.net), new servers and OpenFlow-enabled switches are added. This allows on the i2cat island to accommodate a very dense meshed network topology between the OpenFlow switches, hence empowering experimentation in a variety of fields such as routing or load balancing.

At the Belgian OFELIA island, IBBT (http://www.ibbt.be/en) has made available to users the shared IBBT virtual wall and wireless testbed for emulation of large scale OpenFlow test scenarios. The virtual wall allows large-scale OpenFlow experiments and beyond that, due to software emulation, it also offers an environment for experiments focusing on modifying/enhancing the OpenFlow protocol itself rather than being restricted to a single OpenFlow version. By interconnecting to the w-iLab.t wireless test-bed, OFELIA now makes another step towards more advanced wireless OpenFlow research.

The UK-based OFELIA island of the University of Essex (http://hpn.essex.ac.uk) will add three optical Reconfigurable Add/Drop Multiplexers (ROADMs) in a joint collaborative effort with ADVA Optical Networking (http://www.advaoptical.com). The initial approach is to provide the OpenFlow functionalities on top of the GMPLS-based control plane of the optical equipments. It will represent the optical equipments to the experimenters as an OpenFlow enabled switch and the add/drop ports of the ROADMs will play the role of the OpenFlow switch ports. The internal connectivity in the circuit switched domain (optical domain) will be controlled by an extended OpenFlow controller and GMPLS control plane following an overlay approach.

More details available at: http://www.fp7-ofelia.eu/news-and-events/project-progress/

OFELIA/CHANGE Summer School

November 7-11th, 2011

Berlin, Germany

http://changeofelia.info.ucl.ac.be

The increasing complexity and fundamental problems in today's Internet architectural design and its deployment have led to significant research efforts in the area of Future Internet (FI) in Europe and Clean Slate Design (CSD) in the U.S. In this context, the OpenFlow initiative has recently caught the attention of researchers and even router vendors.

The objective of the OFELIA/CHANGE Summer School is to bring together PhD students and researchers who are currently working on future Internet topics such as:

* Principles of evolving future architectures
* New networking paradigms
* OpenFlow-related topics
* Programmable networks, NetFPGAs
* Network virtualization
* Measurements and analyses that characterize and quantify architectural limitations
* Discussions on interworking with the existing Internet and deployability

The program will contain presentations by well-known international experts on various topics.

PhD students are encouraged to submit a two pages extended abstract describing their current research results. After having submitted their abstract, all PhD students will be asked to comment and discuss some of the other submitted abstracts. This will allow the PhD students to discuss about their ongoing research with other PhD students prior to the summer school to ease discussion and cooperation among PhD students. The number of places is limited and PhD students who have submitted abstracts will have priority over other registrations.

Submissions

Submitted abstracts must be at most two pages long, including all figures, tables, references, appendices, etc. They must be formatted according to the standard ACM double column format.

Submission Deadline: July 22, 2011

Discussion phase: until August 15, 2011

Additional information and a submission website will be available on the summer school's website : http://changeofelia.info.ucl.ac.be/