

ΑΝΑΡΤΗΤΕΑ ΣΤΟ ΔΙΑΔΙΚΤΥΟ



ΕΛΛΗΝΙΚΗ ΔΗΜΟΚΡΑΤΙΑ
ΥΠΟΥΡΓΕΙΟ ΑΝΑΠΤΥΞΗΣ ΚΑΙ ΕΠΕΝΔΥΣΕΩΝ
ΓΕΝΙΚΗ ΓΡΑΜΜΑΤΕΙΑ ΕΡΕΥΝΑΣ ΚΑΙ ΤΕΧΝΟΛΟΓΙΑΣ
ΙΔΡΥΜΑ ΤΕΧΝΟΛΟΓΙΑΣ ΚΑΙ ΕΡΕΥΝΑΣ
ΙΝΣΤΙΤΟΥΤΟ ΠΛΗΡΟΦΟΡΙΚΗΣ
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Αρ.Πρωτ. :25115
Ηράκλειο : 13/02/2020

**Call for expression of interest for two (2) positions of students enrolled to University Graduate Programs
in the Institute of Computer Science (ICS)
Foundation for Research and Technology – Hellas (FORTH)**



Position: two (2) positions – students enrolled to University Graduate Programs
Project: PHILOS
Desired starting date: 01/04/2020
Duration: 3 months
Location: Heraklion, Crete, Greece
Opening date: 13/02/2020
Closing date: 28/02/2020
Ref. : philos_1

Description

The Internet, with its unprecedented success and global scale as a network of networks, depends heavily on few fundamental technologies. One of these technologies is the Border Gateway Protocol (BGP), which glues together the independent networks of the Internet. BGP, based on a three-decade old design, is highly susceptible to BGP prefix hijacking attacks. These attacks, which have been repeatedly covered in the news due to their critical impact in several prominent cases, persistently pest network operators and users accessing their services, as they have the capability to render entire networks (and their services) unreachable. The resulting network outages, lasting from several hours to days, cost millions of dollars. BGP

prefix hijacking events result usually from human error, but can also be malicious. Offenders can impersonate victim networks, steal sensitive information, or stealthily intercept and manipulate traffic destined to legitimate destinations.

Current approaches to defend against hijacking attacks (a) are poorly adopted, due to their high cost and low immediate benefit, or (b) rely on inaccurate detection mechanisms that generate numerous false alerts, while lacking automation. The latter results in manual and slow mitigation processes, which is presently the norm. PHILOS is a new approach to defend against BGP prefix hijacking attacks. It focuses on real-time detection and automated mitigation, relies on novel detection algorithms, and employs new technologies in order to reduce the duration of the detection/mitigation cycle from hours and days, down to a few seconds. It therefore greatly reduces the cost of outages.

The goal of this project is twofold. First, it aims to create a Proof of Concept implementation of PHILOS that can be deployed within the network of potential future customers. Second, it will form a business plan aiming to establish the necessary environment for finding the first commercial customer of PHILOS.

The candidate will carry out assisting duties for the project, covering general research support. For the project's technical aspects, he/she is expected to assist in software maintenance tasks, indicatively handling tasks such as overlooking the execution of distributed simulations/emulations, automating processes and assisting in writing reports.

- **Required qualifications:**

- Currently enrolled to a University Graduate Program in Computer Science, Electrical Engineering or related fields.
- Prior experience in the field of Internet Measurements.
- Fluent knowledge of English.
- Physical presence at FORTH, Heraklion, Crete for the duration of the position.
- Excellent ability to work as a part of a team.
- Professional behavior.

- **Desired qualifications:**

- Strong familiarity with the Border Gateway Protocol and BGP Security.
- Excellent organizational and inter-personal communication skills.
- Ability to work under pressure, attaining short and long-term objectives.
- Pleasant, discreet personality.

Application Submission

Interested candidates can submit their applications via <http://www.ics.forth.gr/jobs/en/> using the link "[Apply for the position](#)" under the announcement. Applications must include:

- Detailed CV
- Scanned copies of academic titles
- Scanned copies of any document referring to the required qualifications

Contact Information:

- For information and questions regarding the application and selection procedure, please contact associate prof. Xenofontas Dimitropoulos (fontas@ics.forth.gr).

Selection Announcement

The result of the selection will be announced on the website of ICS-FORTH. Candidates have the right to appeal the selection decision, by addressing their written objection to the ICS secretariat within five (5) days since the results announcement on the web. They also have the right to access (a) the files of the

candidates as well as (b) the table of candidates' scores (ranking of candidates results). All the above information related to the selection procedure will be available at the secretariat of ICS-FORTH in line with the Hellenic Data Protection Authority. Access to personal data of co-candidates shall be limited to personal data (and relevant data) and supporting documents which have been the basis of the evaluation of the candidates for the specific post(s). Prior to the announcement of the personal data and/or documents of the co-candidates to the applicant, FORTH will inform the data subjects in an appropriate way.

FORTH is compliant with all legal procedures for the processing of personal data as defined by the **regulation EU/2016/679 on the protection of natural persons with regard to the processing of personal data**.

FORTH processes the personal data and relevant supporting documents that you have submitted to us. Processing of that data is carried out exclusively for the needs and purposes of this specific call. Such data shall not be transmitted to or communicated to any third party unless required by law.

FORTH retains the above data up to the announcement of the final results of the call, unless further process and reservation is required by law or for purposes of exercise, enforcement, prosecution of certain one's legitimate legal rights' as defined in the Regulation EU/2016/679 and/or in national law.

We inform you that under the **Regulation EU/2016/679** you have the rights to be informed about your personal data, access to, rectification and erasure, restrictions of process and objection to as provided by applicable regulation and national laws.

We acknowledge also to you, that you have the right to file a complaint to the national Data Protection Authority. For any further information regarding exercise of your personal data protection rights, you may contact the Data Protection Officer at FORTH at **dpo@admin.forth.gr**.

You have the right to withdraw your application and consent for the processing of your personal data at any time. We inform you that, in this case, FORTH shall destroy such documents and/or supporting documents submitted and shall delete the related personal data.