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Trustworthy and Resilient Operations in a Network Environment

TRONE

Deliverable D17

Report on dissemination and exploitation activity, Year 1

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Executive Summary

The purpose of this report is to summarize the dissemination efforts of the TRONE project. The project partners used a number of different means to disseminate their work: a publicly available wiki page, <http://trone.di.fc.ul.pt/>, research papers, one poster, presentations and the deliverables of work. In this document, we give details about all these dissemination means. In particular, we show that dissemination is running exactly as planned in the description of work, and, in the case of research papers, we actually exceeded the foreseen numbers.

1 Introduction

The TRONE project addresses a set of critical problems related to trustworthy network operation. We aim to provide a seamless and dynamic enforcement of the dependability and security of network services. The idea is to make the Network Operation, Administration and Management (OAM) as simple as possible, thus achieving a number of benefits, namely improved Quality of Service (QoS), Quality of Protection (QoP), Operational efficiency and Agility in an environment with increasing levels of accidental and malicious faults. Furthermore, we intend to achieve these goals in very concrete and real use-case scenarios, which we describe in Deliverable D1, “Use Case Scenarios Analysis”. Although picking the use cases of Deliverable D1 was one of our most important activities, we had other central concerns in TRONE during the first year, as well: these are summarized in the Deliverables D3, where we specify the first version of the diagnosis algorithms, and D10, where we make a first specification of the event broker architecture. Regarding the dissemination activity, which we summarize in this particular deliverable, D17, in the first year of TRONE our main concern was to make the project known, using several means for dissemination, like scientific papers, presentations, one poster, leaflets, and the TRONE web site. Whenever meaningful, in this document we assess the productivity of the dissemination activity, compared to the plans of the description of work.

This report is organized as follows: in Section 2 we show the logotype that we selected and are currently using in the TRONE project. Section 3 gives a brief overlook of the web site; Section 4 reviews the publications; Section 5 enumerates the presentations we did in the first year of TRONE; In Section 6 we present the deliverables we wrote so far; Section 7 presents our exploitation plans; Section 9 concludes this report and provides some future plans.

2 TRONE Logotype

One of our first concerns in the dissemination task was to select a logotype, to identify the TRONE project. Eventually, we decided for the logotype of Figure 1, which we are using in all our dissemination means (including this deliverable).



Figure 1: TRONE Logotype

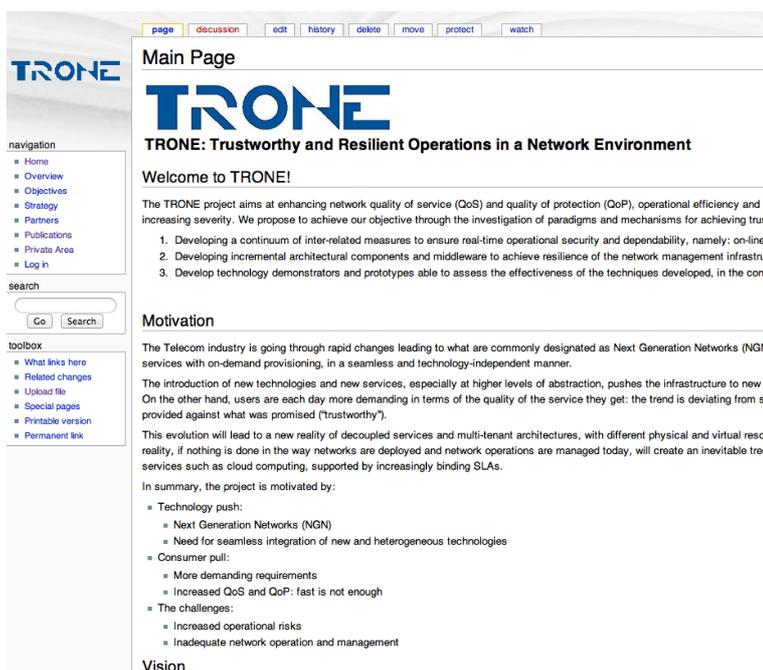


Figure 2: Home page

3 Web Site

The most visible means of dissemination of TRONE is the publicly available wiki page: <http://trone.di.fc.ul.pt/>. Being a wiki, this site allows us to keep two levels of access to data: one accessible by the general public, and a second one, which is private and protected by a password, which partners use to share documents among them. For example, we actively used our web site to produce the poster and the deliverables of the project. Figure 2, depicts the welcome page, with general information about the TRONE project. One can access the private and public areas through a common “navigation” menu on the left side of the page. Searching for the keyword “TRONE” in <http://www.google.com>, our site shows up in the first few pages of results, which, we think, is a very good sign of visibility, given that “TRONE” is a dictionary word.

It is important to mention here that we made all the public documentation available under the URL <http://trone.di.fc.ul.pt/index.php?title=Publications>: papers, presentations, deliverables and other documents. Hence, any person can have a very easy access to the public details of the work we developed so far.

4 Publications

During the first year of this project we published one paper in a journal and four papers in International Conferences and Workshops, some of these with quite low acceptance rates. We point out the fact that all these papers were presented in their conferences by one of their authors. We enumerate these publications here. We start with the journal paper:

- Multihoming Management for Future Networks. Bruno Sousa, Kostas Pentikousis, Marilia Curado, Mobile Networks and Applications (MONET), pages 1-13, Volume 16, Springer, June 2011.

And next, we list the conference papers:

- On the Performance of GPU Public-Key Cryptography. S. Neves, F. Arajo, Proceedings of the 22nd IEEE International Conference on Application-specific Systems, Architectures and Processors (ASAP'11), Santa Monica, California, USA, September 2011.
- Fast and Small Nonlinear Pseudorandom Number Generators for Computer Simulation. S. Neves, F. Arajo, Proceedings of the 9th International Conference on Parallel Processing and Applied Mathematics (PPAM'11), Torun, Poland, September 2011.
- A multiple care of address model. Bruno Sousa, Marco Silva, Kostas Pentikousis, Marilia Curado, Proceedings of the Sixteenth IEEE Symposium on Computers and Communications (ISCC'11), Corfu, Greece, June 2011.
- From static to dynamic protocols: adapting timeouts for improved performance. A. Casimiro, M. Dixit, Proceedings of the I Workshop on Autonomic Distributed Systems (WoSIDA'11), pages 17-20, Campo Grande, Brazil, May 2011.

We should emphasize that the number of papers published so far, exceeds the numbers we promised in the proposal, which were 2 papers in international conferences and 1 paper in national conferences (all our publications were international). Regarding journals, we reached the proposed numbers.

5 Presentation at Events

During the first year the project, we made the following presentations at public events:

- **TRONE: Trustworthy and Resilient Operations in a Network Environment.** António Casimiro. Presentation at the NET-SCIP Workshop on Security, Porto, Portugal, October 2010.
- **TRONE: Trustworthy and Resilient Operations in a Network Environment.** António Casimiro. Presentation at the ICT PORTUGAL Workshop: New Projects in Networks, Software, Energy and Security, Lisbon, March 1, 2011.
- **Automated Failure Diagnosis in Cloud Computing.** Priya Narasimhan. Presentation at the Science of Cloud Computing Workshop, National Science Foundation (NSF), March 2011.

6 Deliverables

In TRONE we produced the following five deliverables so far, which is inline with what we promised to do in the description of work of the project:

- **D1: Use Case Scenarios Analysis.** This deliverable introduces the Use Case Scenario evaluated by Portugal Telecom for the TRONE project, chosen to be the one that the academic affiliates are going to work with.
- **D3: First Specification of the Diagnosis Algorithm.** In this deliverable we present RAMS, a lightweight and scalable algorithm for distributed systems which detects failures using only correlations of operating system metrics collected transparently.
- **D10: First Specification of the Architecture.** In this document, we introduce the First Specification of the Architecture for the Fault and Intrusion Tolerant system for the TRONE project. The presented architecture is useful to solve the problem of improving cloud infrastructure monitoring systems resiliency and trustworthiness (as stated in the deliverable D1).
- **D17: Report on dissemination and exploitation activity, Y1.** This document.
- **D20: First management report.**

7 Exploitation Plans

During this year, the work we have produced was mainly used for research and educational purposes, to create new research opportunities, and to improve the materials in our academic

courses. In particular, we have published most results we achieved so far in International Conferences. Regarding commercial exploitation, since we base our work on the use-cases provided by PT, we believe that in the following years, PT may use the results and recommendations concerning security that come out of this project, to improve and better protect their commercial infrastructure.

8 Assessment of the Dissemination Work

Besides the web site, the poster and some leaflets, in the following table, we quantitatively summarize the dissemination efforts we did so far, by comparing the numbers we promised in the description of work versus the real numbers that we were able to achieve in the first year of the project:

Item	Promised	Delivered
Journal papers	1	1
Conference papers	3	4
Presentations	-	3
Deliverables	5	5

9 Conclusions

We think that the 5 papers published so far and the quite visible web site are perhaps the most successful evidence of the TRONE dissemination and exploitation efforts. In the first year of work, we also used one poster and leaflets in the CMU—Portugal annual meeting and we did some public presentations of the project. We also published some of our results as deliverables, available on our web site. We believe we can say that our dissemination results were highly satisfactory, especially taking into account that we were actually capable of publishing more research papers than foreseen in the proposal of work, and given that we used the largest number of dissemination mechanisms that we could reach.