



PROTEUS

Scalable online machine learning for predictive analytics and real-time
interactive visualization

687691

D6.4 Report on Community Engagement and Technology Transfer Activities – V2

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Abstract

In this deliverable, we report on the activities which we have done to transfer technologies developed within PROTEUS project to big data communities and industries since PR1. In particular, we describe how we engage with the big data community by taking part in various events and collaboration with related projects. Furthermore, we list our activities to transfer the technologies developed within PROTEUS project by giving invited talks and hosting visits of industrial companies, partners, and political delegations.

Executive summary

The goal of WP6 of the PROTEUS project (i.e., communication, exploitation and dissemination) is to connect the project to external worlds. A major step to reach this goal is to coordinate activities to engage with developers of open-source communities (such as Apache Flink) and ease involvement of external stakeholders to extend the infrastructure developed within PROTEUS project by providing tutorials, talks, and workshops about the project achievements.

This deliverable reports on the activities that the PROTEUS consortium has done to transfer technologies developed within the PROTEUS project to the open-source community, big data communities and industrial companies. We categorize our efforts in two main categories: 1) engaging and building communities by attending various big data events and 2) presenting the contributions achieved by the PROTEUS project to stakeholders and industrial audiences.

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Abstract (for dissemination)	In this deliverable, we report on the activities which we have done to transfer technologies developed within PROTEUS project to big data communities and industries since PR1. In particular, we describe how we engage with the big data community by taking part in various events and collaboration with related projects. Furthermore, we list our activities to transfer the technologies developed within PROTEUS project by enumerating invited talks and hosting visits of industrial companies, partners, and political delegations.
Keywords	Community, Engagement, Technology Transfer

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Table of Contents

Executive summary.....	3
Document Information.....	4
Table of Contents.....	5
1. Introduction.....	6
2. Community Engagement.....	7
2.1 Community Engagement and Building.....	7
3. Technology Transfer	8
3.1 Invited Talks.....	8
3.2 Workshops and Conferences	8
3.3 Industrial Technology Transfer at DFKI.....	9
3.4 Industrial Technology Transfer at Trilateral Research	10
4. Conclusions.....	11
References	12

1. Introduction

The goal of WP6 of the PROTEUS project (i.e., communication, exploitation and dissemination) is to connect the project to external worlds. A major step to reach this goal is to coordinate activities to engage with developers of open-source communities (such as Apache Flink) and ease involvement of external stakeholders to extend the infrastructure developed within PROTEUS by providing the list of tutorials, talks, and workshops about the project achievements.

This deliverable reports the activities that the PROTEUS consortium has done to transfer technologies developed within the PROTEUS project to the open-source community, big data communities and industrial companies. We categorize our efforts in two main categories: 1) engaging and building communities by attending various big data events and 2) presenting the contributions achieved by the PROTEUS project to stakeholders and industrial audiences.

As part of the first category, we actively participated in big data, as well as machine learning community engagement. Examples include Flink Forward conference, which is the premier conference for Apache Flink and European Big Data Value Forum. Partners of the PROTEUS consortium participated in various community engagement and building activities. We elaborate more on our activities in Section 2.

As part of the second category, consortium partners presented achievements in PROTEUS for various industrial audiences. For example, Treelogic participated in LibreCon 2017, in which they discussed various achievements of PROTEUS project.

To transfer technologies developed in the PROTEUS project, consortium partners group their activities in three main categories. Firstly, the partners participated in invited talks. Secondly, PROTEUS partners participated in various conferences. Thirdly, the partners perform various activities to transfer technological knowledge, such as presenting PROTEUS to company visitors or interacting with other EU projects.

This deliverable is organized as follows: Section 2 describes our activities for community engagement and building. Section 3 presents our activities with respect to transferring technology built in the PROTEUS project to industries. Finally, Section 4 concludes the deliverable.

2. Community Engagement

In this Section, we describe our activities to engage with big data communities and extend PROTEUS community by attending various big data and machine learning events.

2.1 Community Engagement and Building

- Members of DFKI and Treelogic participated in FlinkForward 2017 conference and discussed achievements of PROTEUS projects (in particular enhancements of Apache Flink carried out in PROTEUS) with the members of Apache Flink community.
- Members of DFKI participated in FlinkForward 2018 conference and discussed achievements of PROTEUS projects (in particular enhancements of Apache Flink carried out in PROTEUS) with the members of Apache Flink community.
- PROTEUS partners attended the Industrial Data Platforms for the Manufacturing domain Workshop as part of European Big Data Value Forum event and shared PROTEUS achievement with other attendees.
- Members of Treelogic discussed PROTEUS achievements with other attendees during LibreCon 2017 [13], the Business and Open Technologies Conference, held in the Edificio CINC at Cidade da Cultura at Santiago de Compostela (Spain), October 19-20, 2017.
- Trilateral Research continued the interaction with the HOBBIT project [14], including a cross-fertilisation teleconference with Axel Ngonga from Uni of Paderborn in March 2018.
- Members of Bournemouth University established a contact with: Dorset EMC [15] UK for the purpose of informing the regional industrial community about our research activities where PROTEUS results are covered.

3. Technology Transfer

We categorize our activities related to the PROTEUS technology transfer into four categories, namely, invited talks, workshops and conferences, industrial technology transfer at DFKI, and industrial technology transfer at Trilateral. These categories are explained in the following subsections.

3.1 Invited Talks

In the following, we list all the invited talks carried out by members of the consortium to promote achievements of the PROTEUS project since RP1:

- Members of DFKI gave for Siemens in ECDF [3] with the title “Apache Flink” in 20 October 2017
- Members of DFKI gave a talk in Dagstuhl seminar (17441) with the title “Big Stream Processing Systems” for a mixture of academy and industry audiences [4]
- Members of DFKI gave a talk in XLDB 2017 with the title “Apache Flink - Big Data Stream Processing” for a mixture of academy and industry audiences [5]
- Members of DFKI gave a talk for Korean CEO delegation (e.g., Samsung) with title “Overview of Apache Flink and BBDC” in April 24, 2018
- Members of DFKI gave a talk with title “PolyBench: The First Benchmark for Polystores” in SPEC RG Big Data Working Group [6]
- Members of DFKI gave two talks at 4th International Workshop on Performance Analysis of Big data Systems (PABS) [7] collocated with ICPE 2018 [8] with titles “Benchmarking Distributed Stream Data Processing Systems” and “Challenges in Benchmarking Big Data an Machine Learning Systems”
- Members of Bournemouth University gave a talk at Workshop on Software Architecture Challenges in Big Data - SACBD@ECSA2018 co-sponsored by BDVA [12] in Madrid (25/09/2018) involving academia and industry- (some guest speakers reported on their finding in the context of EU projects)
- Members of Bournemouth University gave a talk on Smart Monitoring covering PROTEUS’ use case (Steel Industry) at the Smart Factories Workshop organized by Aimen in Vigo, Spain (26/09/2018).

3.2 Workshops and Conferences

In the following, we describe workshops and conferences in which PROTEUS was presented by members of the PROTEUS consortium since RP1:

- Presentation at FlinkForward 2017 Conference: Members of DFKI team gave a presentation with title “I²: Interactive Real-Time Visualization for Streaming Data with Apache Flink and Apache Zeppelin” [1].
- Presentation at FlinkForward 2018 Conference: Members of DFKI team gave a presentation with title “Efficient Window Aggregation with Stream Slicing” [2].
- Trilateral attended Workshop at the European Big Data Value Forum: Industrial Data Platforms for the Manufacturing domain [11] in which they continued their work linking

PROTEUS with other big data and smart manufacturing projects funded under the Big Data PPP (BDVA).

- Members of Treelogic presented PROTEUS during LibreCon 2017 [13], the Business and Open Technologies Conference, held in the Edificio CINC at Cidade da Cultura at Santiago de Compostela (Spain), October 19-20, 2017.

3.3 Industrial Technology Transfer at DFKI

DFKI has many visitors from companies and political delegations both nationally and internationally. The members of DFKI / IAM use each of these visits as an opportunity to promote the contributions provided by all projects in DFKI and in particular the achievements of the PROTEUS project.

The following is the list of companies for which the DFKI/IAM members conducted workshops and talks discussing and promoting technology provided by the PROTEUS project (among the other projects):

- Siemens AG
- Corporate Technology
- Huawei
- Volkswagen Stiftung Data Science
- Bundesdruckerei GmbH
- Amazon Deutschland Services GmbH
- Amazon Development Center Berlin
- Airbus AG
- Commerzbank AG Frankfurt
- Deutsche Telekom AG
- BMW Group
- Samsung Electronics GmbH
- BASF AG

The following is the list of political delegations visited DFKI since RP1 and were introduced to the PROTEUS project (among other projects):

- Visit/meeting from the Chinese Ministry of Industry and Information Technology, August 2017
- Visit from a Chilean Business delegation by the Chile-German Chamber of Commerce, September 2017
- Meeting with the EU Commission head of Unit Data Policy and Innovation, September 2017
- Meeting German Office des Ministry of Science & Technology (MOST) Taiwan, November 2017
- Meeting with a Korean Business delegation, December 2017
- Meeting with the Dutch Economic Mission IoT and Big Data, March 2018
- Meeting Gesandter-Botschaftsrat fuer Wissenschaft und Technik Beijing, July 2018
- Meeting with the Deputy Mayor of Beijing, April 2018
- Meeting with the Technical Advisory board of JingDong (the famous Chinese e-commerce company), August 2018

3.4 Industrial Technology Transfer at Trilateral Research

Trilateral Research liaised with Barbara Pernici (barbara.pernici@polimi.it) from the DataBench [9][10] project and contributed PROTEUS as a potential use case for their task on Holistic Benchmarking of Big Linked Data in cooperation with the BDVA.

Trilateral Research conducted a survey and explained the main technical contributions of the PROTEUS project, innovations and AMII use case. This data formed part of DataBench's eventual Holistic Benchmarking dataset, which was focused on linking business benchmarks and technical benchmarks into one impact story. Due to the obvious overlaps with PROTEUS, Trilateral was invited to contribute to DataBench's data set and link with the project.

4. Conclusions

In this deliverable, we list our activities to promote PROTEUS achievements via community engagement and technology transfer, since PR1. Firstly, we report our community engagement and building activities in big data and machine learning communities. Secondly, we report our technology transfer activities via giving talks, hosting visits, and interacting with other EU projects.

References

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- [2] <https://www.slideshare.net/powibol/flink-forward-2018-efficient-window-aggregation-with-stream-slicing>
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- [14] <https://project-hobbit.eu/>
- [15] <https://www.dorsetemc.com/>