ADAPT

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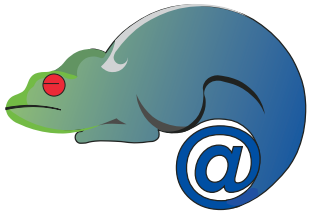
Middleware Technologies for Adaptive and Composable Distributed Components

Dissemination and Use Plan



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Contents

1 Introduction

In order to realize the benefits provided by ADAPT it is necessary to foster its deployment. This can be achieved by two separate means, dissemination of results and exploitation. Both of them are described in detail in the following sections.

2 Dissemination

The dissemination activities will target two different audiences, the scientific community and the end-user community. The dissemination in the scientific community will emphasize the innovations, both in theory and systems, regarding dynamic adaptability for basic and composite services. Whilst the dissemination in the end-user community will highlight the benefits of the resulting project software products.

2.1 Scientific Community

The results of ADAPT will be disseminated by using a combination of means:

- The results of the project will be disseminated across the scientific community by presenting them at top conferences and publishing them at leading journals on related research areas, such as, distributed systems, information systems, middleware, fault-tolerance, and databases. Some conferences and journals might be specific to one or more areas, whilst others might be more general. Some events of interest for the thematic areas of the project are: IEEE/IFIP Int. Conf. on Dependable Systems and Networks (DSN), ACM/IFIP Int. Conf. on Distributed Systems Platforms and Open Distributed Processing (Middleware), IEEE Int. Conf. on Distributed Computing Systems (ICDCS), IEEE/OMG Int. Enterprise Distributed Object Computing, IEEE Int. Conf. on Data Engineering (ICDE), Int. Conf. on Very Large Databases (VLDB), and Int. Conf. on Distributed Computing (DISC). ADAPT members regularly participate in these events as organizers and program committee members as well as contributors.

- The ADAPT consortium, taking advantage of the fact that most of its members belong to the IST network of excellence (NoE) Cabernet, will peruse the means available in Cabernet to disseminate its results among the European researchers related to the research areas of the project. Among the facilities provided by the Cabernet NoE we find: organization of workshops, electronic lists and web pages. The partners are actively participating in different proposals for FP6 that, if successful, they will also be used to disseminate the results.

- ADAPT now is part of a cluster of IST projects on service engineering. This cluster will be a very adequate forum to disseminate ADAPT results. The audience in the cluster consists of partners of projects for which ADAPT could be used as basic infrastructure (e.g. to support financial services). The cluster is now working on preparing a coordination activity for FP6 that, in case of success, it will provide the required funding for a successful exchange of experiences.

- The web site for ADAPT will be the main repository of information related to the project as well as delivered softare. Publications in leading conferences and journals will attract people to the web site what will help to further disseminate the information. Additionally, the papers and technical reports produced by ADAPT will be indexed in web servers such as citeseer to make the project visible to a wider audience.

- Finally, the master and PhD students participating in the project will be encouraged to take up positions in the leading middleware industry. With their deep knowledge of the technology regarding to the project they will span the word about the results of ADAPT in the middleware industry.

2.2 End-User Community

Given that the results of the project will be open software, an important part of the dissemination will consist in announcing the developments of the project amongst the members of the open software community. For this purpose we will resort to the means used by other open-source projects, such as:

- ObjectWeb community. ObjectWeb is a non-for-profit international organization promoting open-source middleware. ObjectWeb hosts open-source projects and they provide the means and the experience to create large communities of users and contributors. Some contributions from ADAPT will try to be hosted by ObjectWeb and use its dissemination channels.
- Web sites specialized in news for open-source software including `slashdot.org`, `freshmeat.net` and `BarraPunto.com` (the latter is the most important for Spanish-speaking users).
- Web sites specialized in news around middleware technology like `theserverside.com`.
- Web repositories of open-source software such as `sourceforge.net` and `berlios.de`.
- E-mail lists, newsgroups and web forums related to open-source software and associated to the software products that will be enhanced by ADAPT. There are currently two products that will be enhanced by ADAPT PostgreSQL and JBoss.
- Using the means available from the web site of the European Working Group on Libre Software at `eu.conecta.it` like the e-mail list `freesw-request@conecta.it`.

Additionally, several members of the ADAPT consortium have important contacts with key members within this community what will ensure a wide dissemination of the software produced by the project. In particular, the industrial partner of ADAPT has experience in open software having the appropriate communication channels within the open software community.

3 Standardization Bodies

Arjuna Technologies has joined the following standards bodies:

- World Wide Web Consortium (W3C): “The World Wide Web Consortium (W3C) develops interoperable technologies (specifications, guidelines, software, and tools) to lead the Web to its full potential. ”
- OASIS: “OASIS is a not-for-profit, global consortium that drives the development, convergence and adoption of e-business standards.”
- Java Community Process (JCP): “Java Community Process (JCP) is the way the Java platform evolves. It is an open organization of international Java developers and licensees whose charter is to develop and revise Java technology specifications, reference implementations, and technology compatibility kits.”

These standards bodies are active in areas in which ADAPT will be contributing, such as service and process definition. Arjuna Technologies intends to champion the technologies produced by ADAPT in these standards bodies.

UPM has joined Oasis and it is a member of the technical committees on WS-CAF and BPEL4WS. UPM has also JCP and intends to participate in the J2EE Activity Service specification.

4 Exploitation

The exploitation of open-source software is usually carried out by one or more organizations that assume the maintenance of the product and provide support to its users. There is a number of companies that are devoted to provide consultancies on open-source software such as, Andago, Alcove, I+D Agora. We plan to publicize ADAPT results among them to foster their use. The clients of these companies are clients looking for open-source solutions and therefore they are very adequate for exploiting ADAPT results. Apart from communicating them the advances taken in ADAPT, we plan to invite them to the open workshops organized by our consortium to guarantee an appropriate dissemination and foster the exploitation of ADAPT results by these organizations. In the Free/Open Source Software Projects Concertation Meeting organized by the Commission, we met a number of companies interested in exploiting ADAPT results. Just to name a few: IDEALX, Conecta, Jaluna, Minoru. These contacts will be very helpful for exploitation purposes.

A second group of organizations that can be interested in exploiting ADAPT results are those that maintain the software products that will be enhanced by ADAPT, such as PostgreSQL and JBoss. We think that an effective technology transfer is feasible in which the technology developed by ADAPT will influence future versions of their software. We will exploit the close contacts that the different partners keep with these organizations (McGill with PostgreSQL, Arjuna with JBoss).

A third group of organizations that can be interested in exploiting ADAPT results are non-for-profit organizations that promote and support open-source/free software, such as ObjectWeb. These organizations can host some of the ADAPT contributions as projects.

Universidad Politénica de Madrid.

UPM has contacted ObjectWeb representatives at the ObjectWeb conference held in Paris November 2003 to explore the possible open-source exploitation of its contributions as ObjectWeb hosted projects. Initial interest has been shown in three contributions from UPM: Middle-R, a middleware for database replication, the J2EE Activity Service based transaction engine for advanced transaction models, and the WS-CAF support for supporting transactional web services.

Prof. Ricardo Jiménez-Peris and Marta Patiño-Martínez joined ObjectWeb as individual members. After the first informal meeting, a presentation was made at the ObjectWeb Architects meeting in Seville in January 2004 that resulted in the acceptance of JASS (J2EE Advanced tranSaction Support) as ObjectWeb hosted project. This project includes the J2EE Activity Service and web service interoperability support.

In February 2004, UPM team attended the ObjectWeb JOnAS Developers Workshop at Grenoble (23-24th February 2004) and presented the projects JASS and Middle-R. Discussions were held with the development teams of JOTM, GOTM, JOnAS, and Bonita to enable the integration of JASS with these ObjectWeb projects.

UPM is still deciding the best open-source exploitation path for Middle-R. UPM is currently considering the possibility to exploit Middle-R as an ObjectWeb project and its integration with C-JDBC (a complementary ObjectWeb project).

UPM has also established contacts with MySQL to integrate in the production version two services required by Middle-R. Contact with MySQL co-founder, David Axmark, has been successful and MySQL has expressed its interest in including the services in the production version. Contacts are kept with Brian Aker, Director of MySQL Architecture.

Contact has also been established with PosgreSQL through Prof. Bettina Kemme (McGill) to include these services in the production version of ProsgreSQL.

UPM signed a contract Sept. 2003 with Microsoft Research Cambridge to extend ADAPT results to Microsoft technology (in an open-source fashion). More concretely, Microsoft is interested in extending Middle-R to support SQLServer.

Università di Bologna.

The main software contribution in which Bologna is involved, a component replication framework, will be distributed as a SourceForge project, under the Lesser GNU Public License (LGPL).

ETH Zurich.

JOpera is the main result contributed by ETH to the project. Right now, most of JOpera was prior art developed as part of other projects. After the decision to adopt JOpera as the main composition engine of the ADAPT project, work has started to make JOpera as open system. JOpera is already available in binary form and can be downloaded under a Berkeley license. For the eventual release of the source code, the actual form of the license will depend on the nature of support and the degree of integration of standards like BPEL. We continue the efforts to clarify these issues.

McGill University.

McGill University heavily participates in the replication efforts within the PostgreSQL community. The Postgres-R replication effort hosted at Gborg (PostgreSQL related projects) has their current contributions mainly coming from McGill University. The efforts on Postgres-R are partly integrated into the ADAPT project. Licensing is under the Berkeley/BSD license according to PostgreSQL policy.

McGill is also participating in the component replication framework led by Bologna.

University of Trieste.

Trieste has chosen to distribute its software under the GNU LGPL (see http://www.gnu.org/copyleft/lesser.txt). JBora group communication tool runs on top of Spread. Spread is developed and licensed by Spread Concepts LLC (see http://www.spread.org).

Newcastle University.

Newcastle is taking part in a UK funded demonstrator project on virtual organisations for chemical industries. Use of technologies developed within ADAPT will be an essential aspect of the project. In particular, service composition and orchestration techniques currently being developed within ADAPT will be highly relevant.

Arjuna Technologies Ltd.

Within ADAPT, Arjuna has written proof of concept software used by project partners that we intend to make open source. We have constructed a specification for the ADAPT demonstrator using royalty free specifications and examples and we intend to make the demonstrator software open source. We have licensed an implementation of Arjuna TS (to the ADAPT project) as a fully functional transactional service while open source alternatives mature. We are continuing to have an active partnership with JBoss group and we continue to feedback improvements to their open source offering. We continue to interact with JacORB to improve their open source offering. However, Arjunas main task now is to push forward with the development of the Web Services Composite Application Framework (WS-CAF) specification to provide a single standard for transaction coordination and a non-proprietary royalty free standard for the industry. In this regard, during the past six months, Arjuna has:

- released the first public version of WS-CAF with Sun, Oracle, IONA and Fujitsu, in August 03.
- worked with our collaborators to initiate an OASIS technical committee on WS-CAF and submitted our specifications. The specifications will produce open standards in the area of Web services context, coordination and transactions and will be royalty free. This is in marked contrast to the work by IBM/Microsoft/BEA on WS-C/T. At present only WS-CAF has a context specification.

- Since the formation of the OASIS TC, we have had many teleconferences and one face-to-face meeting in Boston (December 03), with all of the TC members. Arjuna has worked on the formation of the TC which now includes HP, Attachmate, Booz Allen Hamilton, Iopsis, WebMethods, Systinet, SeeBeyond, Cyclone Commerce and Choreology. We are working through the WS-Context issues to achieve a stable and implementable specification.

- We have also worked within the TC on the formation of an interoperability demonstration sub-committee. This group will define a basic example that will allow different vendors' implementations of WS-Context to interoperate. We've taken the WS-I example and shown where WS-Context can fit into that. This is on going work and the example will evolve as we move on to WS-CF and WS-TXM.

- We have pushed the ideas behind WS-CAF in a number of public venues, such as XML 2003 and the High Performance Transactions Systems workshop 2003.

- We are also continuing to talk to IBM, Microsoft and BEA about closer collaboration between them and the WS-CAF technical committee:
http://www-106.ibm.com/developerworks/webservices/library/ws-comproto/.

- We are working with the Grid community to show how they can leverage WS-CAF:
http://gcn.com/vol1_no1/daily-updates/24939-1.html
and http://www.arjuna.com/library/reports/2003-08-12-GAF-v1_0.pdf.