



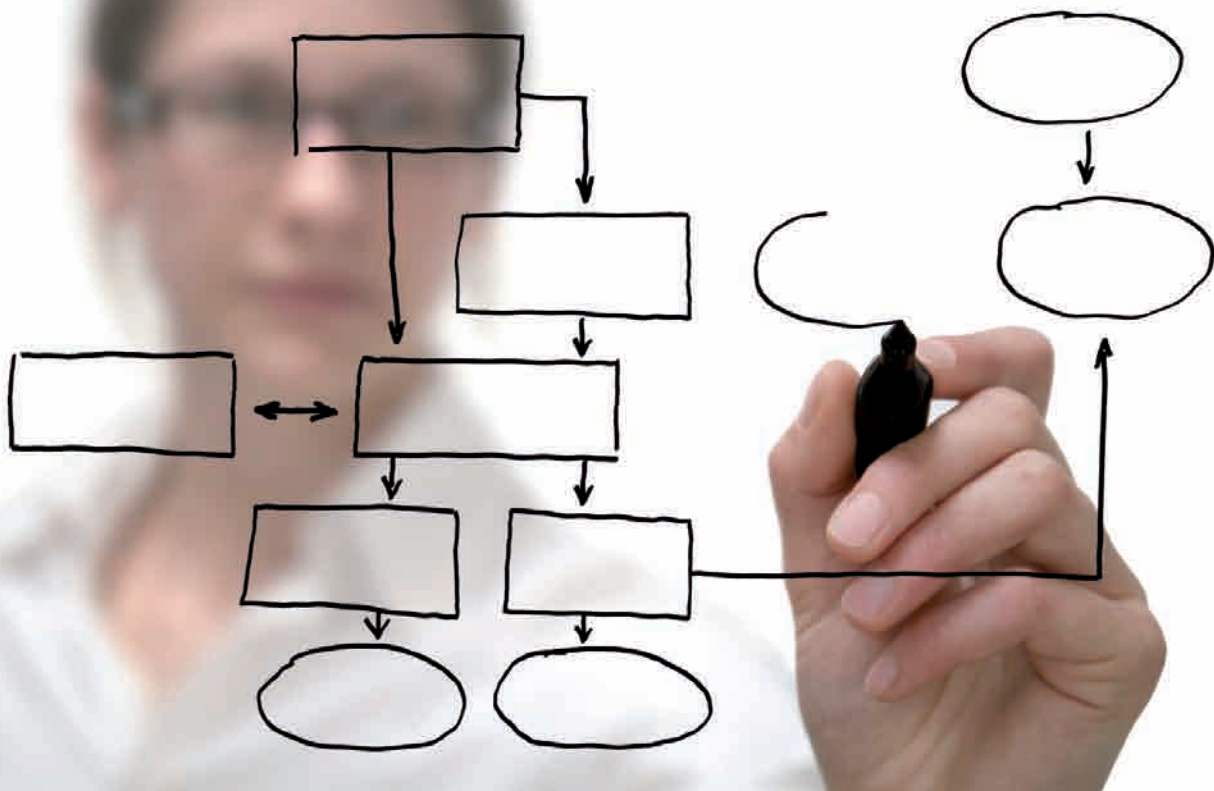
## Open Energy™

Open Source services from Bull

[www.bull.com](http://www.bull.com)

**BULL**

Architect of an Open World™



## Open Source: towards a revolution in software use



What resources do you really have at your disposal to capitalize on and modernize your business assets?

Do you believe that your information system, as it stands today, is sufficiently agile, secure and interoperable?

Do you find that you can take full advantage of new technologies?  
Are you always having to develop increasingly complex systems, faster and at a lower cost?

Can you guarantee the sustainability and scalability of your application portfolio?

Is the availability of the source code a key criteria when it comes to independence and quality?

# Driving innovation and competitiveness

**The maturity of Open Source solutions available today offers IT Departments a unique opportunity to increase flexibility, reduce costs and promote innovation.**

## **Open Source, a new approach to software.**

Information and Communications Technologies are at the heart of a transformation that is turning ways of innovating, producing, distributing and using software: Open Source. The key characteristic of the process is that the source code is available to all, and implements industry standards. These quality guarantees are not insignificant: with the source code visible, everything is clear and easy to read. So the sources are constantly being improved, enriched and maintained. The rapidly growing number of Open Source components represents a wonderfully rich resource which now extends even to the most mission-critical applications. Another major upheaval concerns the development of Open Source software, which is enabling the move away from traditional, 'closed' approaches to more collaborative methods born out of the Internet. The basic principle is simple: bringing together a wide ecosystem of contributors, suppliers and users to share the development work, by allowing everyone to freely use, modify and, under certain conditions, re-sell the shared software. The aim of this is to increase the number of contributions, make it easier to adapt the technology to everyone's different needs, enhance standardization, and encourage it to be widely adopted as possible.

At least as important as quality and flexibility, Open Source software

guarantees security and interoperability, giving you complete control over your information system and protecting your portfolio of applications. As a result, numerous organizations in both the public and private sectors have adopted Open Source to accelerate their growth, while at the same time enhancing their competitiveness and their capacity for innovation and helping them keep control over their investments.

## **Bull offers a structured, professional approach to the world of Open Source.**

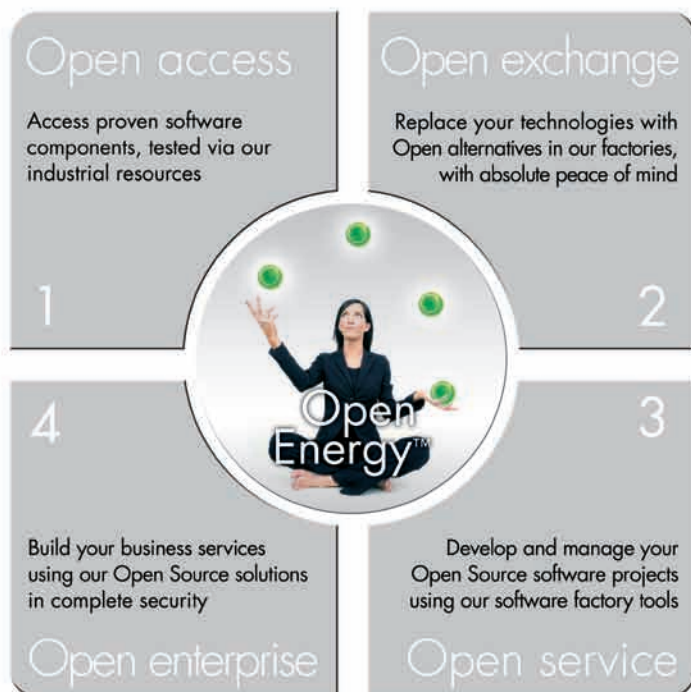
Thanks to its investment in research and development in the field of Open software, and its close involvement in many of the largest projects in Europe, Bull has built up a wealth of experience which means it is now quite naturally one of the major players in the Open Source world. As a result, the company is the only European company which contributes to Open Source software at three different levels: as a manufacturer of IT hardware, a software publisher and a systems integrator.

Bull makes use of the very best Open Source technologies and methodologies to offer a comprehensive approach to service delivery, specially designed to tackle the constraints of corporate projects: Open Energy™. This range of services draws in Bull's industrial capabilities and responds to the four key requirements for organizations who have opted to use open solutions: support, porting, development and integration.

# Open Energy™

Open Source services from Bull

The 4 key elements of an industrial approach to Open Source



## Support

You have chosen to use Open Source software components, and you are looking for a single point of contact to take responsibility for all your software arrays.

We offer you direct, open access to the best Open Source skills in Europe. Bull uses its expertise in systems integration and support to integrate all the components or software you have chosen yourself, into proven software arrays: taking into account all aspects of measurement, performance guarantees and operational effectiveness. Our professional support centers operate 24x7, and manage over 20,000 pieces of work every year with concrete commitment to results.

## 2 Open exchange

### Porting

When it comes to certain applications, you have to respond to growing requirements for more power despite budget restrictions.

Bull can port your applications running on existing proprietary software to open software arrays, either in server or workstation environments. This move will not only give you lower application costs, but also greater independence because the source code is available and it is easier to update as part of an application enhancement initiative.

We can help you through this change so that you can avoid the main technical and architectural pitfalls, and guarantee the levels of performance and support you need.

## 4 Open enterprise

### Integration

In order to make sure your information system is more flexible, this often involves 'rethinking' your technical or application architecture.

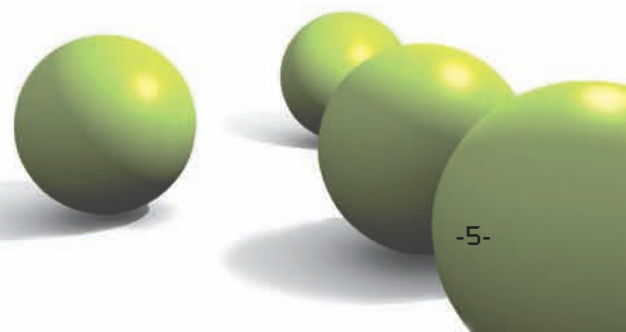
Bull offers a dedicated methodology to achieve this, which features a number of open components and aligns with J2EE standards. This platform has been enhanced with a number of developments carried out by Bull and partners, including Red Hat JBoss software for SOA and enterprise applications, and OW2 software such as the JOnAS application server and the Bonita workflow engine. As a result, Bull can help you design and implement totally secure Service-Oriented Architectures (SOAs). What's more, Bull can effectively help you deliver your Open Source-based Business Intelligence projects.

## 3 Open service

### Development

Keeping control over the costs, quality and timescales on your software development projects is an absolute priority.

To help you achieve this, Bull offers an innovative, structured and professional approach, Virtual Shore™, which allows you to put together the best team to meet the cost, technological and business challenges of each project. At the heart of this new approach to IT governance are the NovaForge™ collaborative development platform, the use of Open Source software that has been thoroughly tested and maintained by Bull, and the ability of our services centers to mobilize the best resources and get teams working as part of a network to ensure a continuous integration process on projects. As a result, you can maximize your production capacity while at the same time controlling costs, quality and timescales.



# Bull's services center network in the age of collaborative software development

## Bull services centers worldwide:

- Grenoble (Open Source development, Java, storage) ;
- Paris (Open Source development, PHP, systems integration for major projects)
- Marseille (Open Source development, Java, systems integration for major projects)
- Bordeaux (Telecoms solutions, mobile computing)
- Casablanca (Open Source software development, Telecoms solutions)
- Lodz (taxation and customs solutions, public sector solutions, Web technologies)
- Beijing (new technology and Open Source development)
- Sao Paulo (Telecoms)

## VirtualShore™, a revolution in collaborative development.

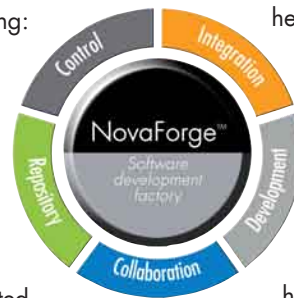
Bull has developed a whole new approach based on the founding principle of bringing together – for the duration of a particular project – the best available resources to work in a shared and highly structured environment. It does not matter where those resources are located geographically, in contrast to off-shoring or near-shoring, nor is it simply a question of cost cutting: the key criteria is to constitute the best possible 'community' to deliver the project. To achieve this, Bull has developed NovaForge™, a collaborative software development factory, as well as putting in place an integrated network of services centers each providing specialist resources that can be mobilized for any project.

## NovaForge™, an industrial development platform.

NovaForge consists of a wide range of services and tools that serve to structure and professionalize software development projects. The platform brings together all the 'work spaces' that will be needed during the project life-cycle, in a single, shared environment. It is structured around five key areas: the database, where elements that could be re-used (such as software components, tools, practices and procedures) are stored; a secure, collaborative portal for project

management and control of associated documentation; a development workshop (based on the Eclipse IDE and UML model); an integration and testing structure, which uses high level Open Source tools to enhance production quality; and finally a project management module, which uses a series of indicators to provide a shared view of project status in terms of quality, resources and costs.

This global, integrated approach helps manage expectations, and encourages the re-use of elements, sharing of information and flexibility because the tools used are scalable and open. By providing end-to-end project coverage, NovaForge helps reduce the development workload, optimize scheduling, improve the quality of deliverables and enhance acceptance by all those involved in the project. It is used by Bull itself in its services centers to carry out software development and enhancement projects, as well as third-party application maintenance and application testing. Bull customers can also use NovaForge within their own IT organizations, whether in hosted mode or on-site at their own locations.



# Bull, Open Source in action

**As Europe's only IT manufacturer, and a major European player in infrastructure services and solutions, Bull is pioneer in Open Source.**

As 'Architect of an Open World', Bull is heavily involved in the growth and development of Open Source and has launched numerous initiatives in this areas. The company's aim is to bring a professional and structured approach to the Open Source world. further develop open ecosystems, and promote new ways of helping businesses to innovate and become more competitive. In particular, Bull is involved in Open Source as:

**A major contributor to the largest communities** involved in developing open software (Linux foundation, Eclipse, Apache, OW2...). Most notably, Bull is the co-founder – along with INRIA and France Telecom Orange – of one of four largest communities in the world of Open Source, OW2, contributing to the emergence of an active network of innovative software publishers.

**A systems integrator and designer of Open Source-based solutions:** Bull has delivered numerous major projects across Europe. 80% of the code used in Bull supercomputers, ranked number one in Europe, is Open Source. As a systems integrator, Bull has developed an innovative Open Source services offering, Open Energy™, which uses the best available Open Source technologies and methodologies. Its new approach to collaborative development, Virtual Shore™, is central to its international network of services centers, and has helped many customers rethink how they maintain the application portfolio and keep it up to date.

**An active contributor to the growth of the Open Source industry.** In its role as a co-ordinator of major projects and research initiatives at European level (Qualipso) and nationally (System@tics in France), Bull sits on numerous project and community Boards.

Bull, a pioneer of Open Source and VirtualShore.

**1999** : Major contributor to Linux® for large-scale Data Centers.

**2002** : Founder member of ObjectWeb/ OW2, the world's leading open middleware consortium.

**2005** : Designed and built TERA-10 – ranked as the number one supercomputer in Europe and number 5 worldwide – based on Linux and using 80% Open Source code.

**2006** : Launched the NovaForge™ software development factory.

**2007** : Founder member of Qualipso, the leading international consortium focused on Open Source software quality.

**2008** : Introduced VirtualShore, a revolution in collaborative software development.





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