

Open Source, the key to an open world



With just a short break for the festive season, 2008 is starting out in much the same vein as 2007 ended: with everything moving at breakneck speed. Because that's the world we live in today: no respite, no limits...

A world of innovation and change. An open world – of which Bull intends to be the architect – with Open Source proving the key for us to access it.

As Jean-Marie Leclerc, General Manager of the CTI (Information Technology Center) at the Republic and Canton of Geneva, explains so well, the Open Source approach is totally in line with the knowledge society that is emerging before our eyes. Above and beyond advances in technology or software robustness and performance, Open Source is first and foremost a philosophy based around knowledge, constantly being enriched through sharing, collaboration and transparency. The very recent record set by Bull and the French Atomic Energy Authority (the CEA) when it comes to searching for images in very large databases is a perfect illustration of the benefits of cooperation and of making knowledge available to everyone.

So, Open Source not only gives us the tools for such collaborations, but also actively encourages them because by its nature it depends on collective action. As part of organizations including OW2 and QualiPSo, Bull is actively involved in creating this overall mood: something that now transcends the boundaries of the Open Source community. Businesses and public sector bodies are increasingly aware that knowledge can be shared; because true value, in effect its core business, really resides in an organization's know-how and creativity. The large-scale outsourcing services that Bull delivers to the French Post Office (La Poste) are an excellent example of this: with each of the partners contributing its own skills and know-how for an optimum result.

As much a social phenomenon as a technological one, the current wave of Open Source continues to gather momentum: and 2008 will doubtless prove even more profitable. Having been one of the first to seize the initiative on Open Source, we are confident that this year will be a fascinating one, with great potential for Bull. My New Year's wish is that it will prove to be so for you and your business as well.

Didier Lamouche,
Bull Chairman and CEO

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GUEST SPEAKER

“When information and knowledge cross over borders, openness is essential”

Interview with Jean-Marie Leclerc,
General Manager of the CTI (Information Technology Center)
at the Republic and State of Geneva, Switzerland.

E-government has led to a profound rationalization of public sector information systems. How have you gone about it?

Citizens and businesses have a right to expect high-quality public services that evolve and deliver value for them. To achieve this, our

aim has been to equip our part of government with a well-structured, flexible service-oriented architecture. E-government inevitably involves intersecting technologies and a well-structured program for harmonizing procedures in different departments. *(page 2)*

HOT TOPIC

La Poste chooses Bull to modernize, consolidate and secure its IT production sites

After its open call for tender focusing on the security of its IT Production sites, the French Post Office (La Poste) has entrusted Bull with the relocation and hosting of its server network on two industrial, highly secure sites. The 16-month relocation phase was completed in April 2007, and the agreement is now operating as on-going services contract. *(page 3)*

GOVERNMENT & OPEN SOURCE

“When information and knowledge cross over borders, openness is essential”

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General Manager of the CTI (Information Technology Center) at the Republic and State of Geneva, Switzerland.



E-government has led to a profound rationalization of public sector information systems. How have you gone about it?

Citizens and businesses have a right to expect high-quality public services that evolve and deliver value for them. To achieve this, our aim has been to equip our part of government with a well-structured, flexible service-oriented architecture. E-government inevitably involves intersecting technologies and a well-structured program for harmonizing procedures in different departments. From financial administration, social services and business registration, to planning permission, the registration of medical practitioners and educational facilities... all of these services will be available on-line. We are gradually introducing standardized components and services, eventually leading to industrialization of procedures that are applicable to every project. For us, there's no "big bang"! It is an illusion to imagine rebuilding an information system (IS) by getting rid of everything that already exists. An IS is updated gradually, and re-organized in a modular way, function by function, so as to avoid paralyzing the whole. You need to start out with a global vision, and then single out the various layers making up the technological plat-

The CTI handles nearly 800 business applications and 600 servers, and provides services to 22,000 users. In 2004 it chose to use Open Source software to rationalize and harmonize its architectures, and ensure interoperability. Appreciating the close proximity and responsiveness of Bull's development and service teams, the Center opted for Open Source components including the JOnAS applications server and Bonita workflow engine, along with Bull support.

form (servers, PC, networks, security, legacy...), and start with virtualization of servers, and then of data.

You chose Open Source. Why?

When information and knowledge cross over borders, openness is essential. With the information society, we're dealing with a new paradigm. We had five main considerations when coming to this decision.

The citizen must be at the heart of e-government. With the e-voting project we trialed as early as 2002, we realized the whole process of data creation needed to be secure. This led to the choice of an architecture that had Open Source as its backbone; especially because government has a key role in encouraging the population at large to get involved in the information society.

The need for transparency and openness with respect to our citizens. Given that information is effectively a "social asset", the State must guarantee that it is valued, long lasting, secure and independent environment. This naturally leads to appropriate choices in terms of architecture, data exchanges standards and security.

Independence and sovereignty. Having control over our own information systems evidently means we are free from any constraints imposed by suppliers.

Interoperability and flexibility. Breaking down barriers between different departments, and the cross-functional nature of data and processes has put interoperability at the center of our concerns, at a time when IS are increasingly becoming interconnected: hence the importance of standards. In addition, the notions of components, services and virtualization are now giving us the flexibility we need to adapt the IS to our constantly evolving environment.

Costs and skill sharing. Opting for Open Source leads to huge savings on licenses for an organization like ours. But this goes even further with communities and collaborative development, which encourage partnerships of every kind: local, regional, public/private... We are contributing to this approach, and have, for example, made an "anti-spam" solution available to the general public developed by CERN (European Organization for Nuclear Research).

Have you any good practices you can share with us?

We are halfway across a fast-flowing river, so to speak, but I am convinced that we need to take both a "top down" and a "bottom-up" approach. You need a clear vision to establish your targets, but above all do things that are already mature and well proven in the field. We adopted ITIL, of course, for IS management, and CMMI for development projects, etc. But the key to success is an approach based on consensus, mediation, and exchanges to guarantee consistency and uptake across all the functions involved.

We are entering into a world where: *"Imagination is more important than knowledge. For knowledge is limited... while imagination embraces the entire world, stimulating progress, giving birth to evolution."* I find this idea, as expressed by Einstein, particularly relevant when applied to the challenges we are facing today. In the information society, the challenge is not a technical one. The important thing is to put technology at the service of both citizen and society. This involves a more participative approach to government, embracing citizens, enterprises, and a shared, social economy.

POSTAL

La Poste chooses Bull to modernize, consolidate and secure its IT production sites

French Post Office successfully delivers a project with significant human, industrial and logistical challenges



Three factors have been vital to the success of this complex industrial-scale project.

- The expertise in industrial processes provided by the teams from La Poste, coupled with very strong cohesion with Bull teams, ensuring that tools and methods could be rapidly and efficiently shared
- Bull's industrial capacity, which enabled the IT platforms to be delivered within the timescales dictated by La Poste, while complying to the very latest standards in force
- Bull's know-how when it comes to data center "urbanization", which enabled the company to provide the entire package of system engineering, processes, tools and project management, with a strong emphasis on risk management.

"In addition to a highly professional relocation process, it was the joint efforts of our teams and the quality of the manpower that made the difference. All the transfers were successful, as was the switch-over to on-going secure contractual arrangements. What's more, this was

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achieved against a backdrop of especially demanding requirements for service continuity and the need to guarantee instantaneous business recovery," explained Michel Delattre, IT Director for La Poste. "Today, we are benefiting from an infrastructure that meets our very high security requirements," he added.

Jean-Pierre Barbéris, General Manager, Bull France commented: *"The way that the teams from La Poste and Bull have worked in tandem has been exemplary*

throughout this highly complex relocation, both from the industrial and logistical points of view. This rewards the considerable efforts we have made in terms of investment in our data centers, with a view to providing highly secure, integrated and environmentally-sustainable production environments. When combined with state-of-the-art tools and a set of highly industrialized service delivery processes, we can offer our customers real benefits in terms of service levels, flexibility and security; and all cost-effectively."

LA POSTE


▼ Key figures for this major project

- 2,200m² of IT platforms integrated in under four months
- 1,733 servers and 870 network installations hosted in 500 racks
- Eight La Poste production sites relocated to two remote Bull sites
- More than 120 km of optical fiber network cables deployed
- Ten separate relocation initiatives, involving teams from La Poste, its service providers and Bull Outsourcing Services
- Between 30 to 70 Bull's staff mobilized for each relocation, and involved over eight weekends.

VISION

From Open Source to Social Computing



Jean-Pierre Laisné, Director of Open Source Strategy, Bull.

Director of Open Source Strategy at Bull, Jean-Pierre Laisné is co-founder of AFUL* and President of the OW2 consortium: the main international consortium focused on open middleware, and the result of the 2007 merger of the ObjectWeb and OrientWare consortiums. Jean-Pierre Laisné also runs the Competence Center initiative for the QualiPSo consortium, an international alliance of major players in industry dedicated to maintaining quality in Open Source software.

In the mid-1980s, several hundred developers united their efforts behind a simple idea: to invent a new mode of software development enabling a collaborative approach to innovation. The Open Source movement was born. Twenty years on, the original idea has given rise to an irreversible evolution in the software industry that is revolutionizing operating systems, middleware and now business applications. This exceptional success story is at the origin of a new approach that – both in terms of technology and content – is transforming the way we live and do business. Because we have to realize that Open Source is only the precursor to a much bigger phenomenon: that of the collaborative world, and virtual ecosystems. Building on the growth of the Internet, this phenomenon has already started to turn the production chain on its head, by linking together everyone involved – developers and users – and giving them ways to collaborate, and instigating new approaches to creation and consumption, whether they may be:

- Technological, with Open Source software and “mashups”
- Cultural, with Web 2.0 and its quintessential symbols: Wikipedia, YouTube, MySpace...
- Economic, with the growth of the “virtual enterprise”
- Political, with e-government and participative e-democracy.

Let's make no mistake: this is not something symptomatic of other changes, nor a new marketing approach trying to repackaging the same old concepts, production and consumption modes with a new kind of “buzz”. It is a very solid tendency. At the moment there is a real redistribution of power away from the producer to the user, from individuals to networks, and from

organizations to ecosystems. So while the 1980s was the age of the “centralized computing”, the 1990s was the “personal computing” era, and this first decade of the 21st century will be the age of “networked computing”, the decade beginning in 2010 will be the era of “social computing”.

Of course, we are still only just glimpsing the first signs of this era. The effects of the revolution are just starting to have an impact on leading-edge areas such as digital content, convergence of information/telecommunication technologies, offshore services and even public sector modernization programs. The appearance of the first “mashup corporations”, the development of social networks, and the emergence of new virtual worlds such as Second Life are omens announcing the birth of this new world.

We are only just starting to climb the innovation curve and its perilous summit of inflated expectations. In the Darwinian world of innovation, there will be setbacks and disillusionment, and we need to remember what happened in 2001. But why, after Web 1.0 and then 2.0, are many promising “start ups” already organizing themselves around Web3.0 (*sic*)? Because all today's players intuitively sense that a new map of possibilities is opening up, extending the horizon, and defining the shape of a new world in which our approach to creation and consumption is bound to evolve. A new world where even the way businesses are organized, as well as governments and public sector bodies, will benefit from the need to adapt to this new virtual environment.

Looking back on the lessons of the past 20 years and the key role that Open Source software has played in creating open technologies, so fundamental to this new world, we can look forward to the fact that it will play an even greater role in the future design and creation of “social computing” interfaces and technologies. You only need to

look at the battles being fought on the ground by Facebook and Google, in trying to unite communities of contributors to social networking software, or at the interest being shown in Open Source on SecondLife when it comes to conquering even more virtual territories, or to analyze the way service-oriented architectures have developed in order to construct the “mashup corporations” of tomorrow... But in the end isn't history repeating itself? Isn't it openness, once again, that is enabling us to catch a glimpse of new frontiers?

From the business point of view, these new perspectives naturally signify new demands on companies and public sector bodies. What's more, we can expect that the way this technology is used in the private sphere will engender new needs within the enterprise: don't blogs and Facebook-type social networks, for example, represent an innovative way of sharing knowledge within an organization? Thanks to these new knowledge management tools, an employee with in-depth knowledge of a highly specific subject can easily make this know-how available to his or her colleagues whatever their position in the organization. Of course, these new applications will require a concerted effort both from a technological point of view (by the IT department) and from an organizational point of view (by senior management).

Against this backdrop of heightened complexity, which inevitably generates new ideas, who better than an Architect of an Open World – characterized by its combination of skills and vision – to anticipate which evolutions will be required? You can count on Bull's teams to guide you adapting your systems to meet the new challenges faced by all today's organizations.

* AFUL: The association of French-speaking Linux and Open Source software users

E-GOVERNMENT

Bull to partner the Val-d'Oise council in the further development of the CapwebCT local e-government platform

- 100% Open Source, CapwebCT is approved by the Cap Digital competitiveness cluster
- Bull to provide hosting, architecture restructuring, industrialization of third-party application maintenance and implementation processes; this will also involve coordinating the CapwebCT Open Source community

The regional council for the Val-d'Oise departement in France (CG95) has set itself the aim of helping the smaller local authorities in its area innovate thanks to New Information and Communications Technologies (NICTs).

CapwebCT is at the heart of this approach, with the delivery of four different sub-projects:

- **CapInfo** is aimed at creating an Internet site with a built-in content management system constructed around Open Source components. The site is to have a fully configurable content and graphic style, and is to be based on a shared technical platform.
- **CapDémat**, offers local government users a personalized user space with à la carte local on-line services accessible via Internet. Fifteen on-line services – ranging from education to cultural events, births, marriages and deaths, and planning – were made available in 2007 for deployment in the authorities concerned. CapDémat is built around an on-line services generator that facilitates team working and collaboration.
- **CapAgent** is an Intranet providing local council employees with a "virtual office", where they can find all the team-working tools they need to organize, communicate, share and process information.
- **CapInter** brings together a number of interactive tools enabling local councils to establish a working relationship with an identified user in a straightforward way.

This collection of software applications developed in Open Source is the result of a large number of contributions, making CapwebCT an extremely functionally rich solution that is currently being used by around a hundred local councils. The project has been officially stamped by the Cap Digital competitiveness cluster.

With the third-party application maintenance services it is providing, Bull will be helping CG95 promote and develop CapwebCT

Having been closely involved with the CapwebCT project ever since its initiation (with the prototype for the CapInfo Web site generator and a functional survey of service groupings for CapDémat), Bull has now been chosen as the provider of both corrective and evolutionary application maintenance, as well as host for the platform, and will be responsible for coordinating every aspect of this project:

- **architecture:** the CapwebCT platform is distributed throughout the Val-d'Oise department. It is used for CG95's own needs, and is likely to be distributed to all authorities in the region. This means its architecture not only has to be very robust, but also scalable and built around Open Source components in order to offer effective bespoke deployments with optimum timescales and costs. Bull has contributed to the design specification, and has helped choose the Open Source components to be used
- **Hosting:** CapwebCT is hosted at Bull's highly secure Data Center, so that it can offer high-quality service around the clock, as well as controlling development work and optimizing costs. Today, more than one hundred local councils are being hosted.
- **Support:** Bull supports CG95-approved companies, as this stamp of approval guarantees their ability to install CapwebCT. Third-party application maintenance processes must therefore be geared to ensuring continued ease of installation and configuration by other companies.
- **Sharing:** CapwebCT is built using Open Source components, and is also destined to be redistributed within the community to facilitate its promotion, deployment and enrichment within the largest number of

local councils. New developments will be re-distributed by both CG95 and Bull.

- **Chairing the CapwebCT Open Source community (Capwebct.org):** united around a user club, this entity enables CG95 to support approved companies and the partner network, to promote the implementation of the CapwebCT platform in other local authorities, and to encourage and gather together contributions to its development made by new users.

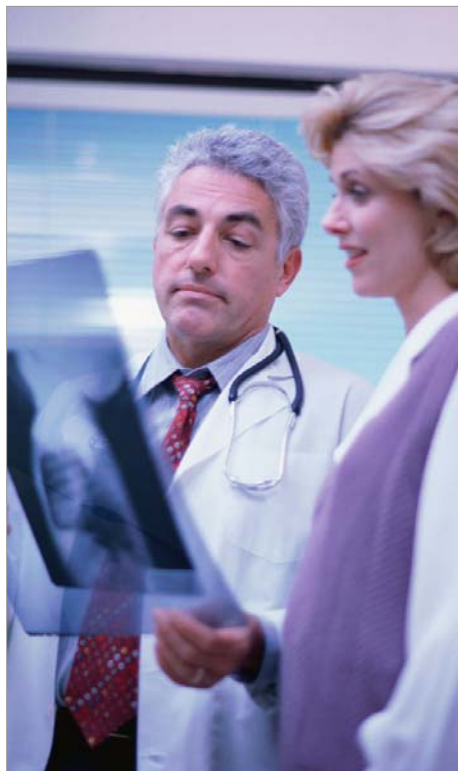
A 100% Open Source, functionally rich architecture

As part of the project to restructure the main module, Bull is supporting CG95 in the consolidation of the various modules. There are three challenges:

- **Implementing a long-lasting, robust and scalable architecture**
Implementing a long-lasting, robust and scalable architecture building upon an SOA model. The objective is to facilitate and rationalize exchanges between applications, whether this is via MOM-type asynchronous exchanges or synchronous (Web Services-type) exchanges, with the implementation of an Enterprise Service Bus (ESB) to centralize administration and flows associated with exchanges.
- **Choosing the best Open Source components:** for each new functional requirement, Bull works with its customer to select the most suitable Open Source applications according to functional, technical and life-cycle criteria.
- **Guaranteeing optimum quality:** the aim of making CapwebCT a benchmark product for all French local authorities and to distribute it widely within the Open Source community means that delivering the highest-quality versions is essential. This requirement is being met thanks to the use of a high-performance quality tool that forms part of Bull's industrial software development platform, NovaForge™.

HEALTHCARE

Nine Belgian hospitals choose Evidian's Enterprise SSO and Identity Management.



In order to secure access to patients' medical data, nine hospitals in the province of Liege, Belgium, have chosen Evidian's¹ solutions. The hospitals will implement the Enterprise SSO, Policy Manager and Identity Manager modules of Evidian's IAM Suite.

The complete solution will help mobile hospital staffs, who need to move from hospital to hospital, to access their applications and patient history in each hospital. As a result, 4500 users will be able to consult the critical medical data they need, rapidly and securely.

The Liege hospitals chose IAM Suite because the Evidian solution is complete and integrated. It allows organizations to implement role management (RBAC²), workflow, user provisioning and single sign-on (SSO) access control.

"We have been convinced by the new role management approach available in IAM Suite 8. We require RBAC-based management, and Evidian seems to offer a pragmatic answer to our requirements", said Luc Ceylens, CIO of the Centre Hospitalier

Chrétien. "The Evidian suite offers all the services we need in an integrated offer: this was a key factor in our decision".

This choice is part of a larger federal project in Belgium, aimed at managing the patients' medical records project. The nine hospitals, which together form the Centre Hospitalier Chrétien in Liege, provide 995 beds with 800 doctors and 1600 medical staff.

For more information on Evidian and its partners' software solutions, go to :

<http://www.evidian.com>

(1) Evidian is a Bull subsidiary, specialized in IT security solutions

(2) RBAC : Role-Based Access Control

TRENDS

Open Source: moving from revolution to maturity

Boris Auché, Director of Open Source development, Bull Services

Responsible for developing the Bull Services Open Source offering, working with customers in the early consultancy phase of projects. Nominated in 2007 as the Executive Director and Vice President of FNILL¹, Boris has a longstanding involvement with Open Source, Open Source software services companies and communities. Boris is also responsible for the Open Source section of AFNOR's² Website, Standardmedia.com.

This year has seen a growing number of changes around Open Source: an expansion in the uses of Open Source, Open Source players acquired by major IT companies, etc. Why is this?

When you look at how it comes to market and is adopted by users, Open Source is obeying the same rules as any other product or offering. This understanding of the Open Source phenomenon, and our analysis of the impact it was having led to Bull be the first supplier to restructure our offerings, under the Open Energy™ banner. We have put in place technology watch, promotion and sales activities in line with the level of maturity and penetration of Open Source in the marketplace.

The significant movements this year around Open Source confirm just how accurate our analysis of this phenomenon was. Open Source is now widely accepted, and is moving beyond the limited sphere of the "innovators" to the much larger one covering the majority of users – what analysts call the "mainstream".

The time for evangelizing about Open Source is coming to an end, and we are moving into a phase of mass availability and uptake. We no longer have to explain how Open Source facilitates innovation, or how using it will reduce costs... What users now want to know is, basically, how they can use it, and to what for? So we have moved on from a technical "how does it work" model, to a "what's it for" approach to its use.

The deployment of Open Source is happening in a highly pragmatic way, and is no longer unduly concerned with ideological arguments about Open Source vs. proprietary solutions. But it is accompanied by a clear statement – that from now on, Open Source software is firmly established within information systems – and demands from both ISVs and Open Source communities: to be able to benefit from off-the-shelf solutions, to make implementation easier by providing support, to

guarantee interoperability between the whole spectrum of solutions, in order to be able to implement mixed architectures...

In actuality fact, in 2007 we saw the first signs of Open Source's maturity with its use in large-scale implementations such as the 20,000 workstations rolled out for the PSA Group, or widespread critical applications such as the French inland revenue's *IR Télé* project for filing on-line tax returns.

So it is entirely normal that the market is starting to become more structured, and that Open Source is becoming professional: that's what customers are demanding, and is certainly a pre-requisite to the utilization and deployment of Open Source in the information systems of major enterprises.

What are the consequences for Open Source industry players?

The consequences are huge. Open Source extends well beyond the purely technical sphere, and is starting to touch decision-makers, those responsible for strategy, purchasing and even senior management. This is a whole different universe. One where the technical arguments – about technological advances, technical quality, innovation, etc. – are less crucial, and where other criteria hold sway: total cost of ownership, the established user base, support, documentation, stability... In this universe, we're moving away from a tactical attitude to using Open Source, and towards a strategic approach, with formal policies, and even strategies for choosing software, applications and deployment.

Two surveys, carried out by Saugatuck Technology and published in August 2007³ and October 2007⁴, identify possible impediments to the deployment of Open Source software. While there is no longer any convincing argument for using Open Source, there are no major barriers either. Functionality and innovation now account for less than 50% of any decision



to use Open Source. Support, scalability, and strategy have taken the lead. The "costs" and "support" arguments will carry the day purely on the grounds of independence and flexibility. Not because the users have changed in themselves, but because they are no longer the same people!

This upsets the rules of the game in Open Source. We are moving away from a strategy of "offering" to a strategy of "demand".

To the extent that the use of Open Source is widening away from just innovators and early adopters, to a greater number (the "early majority"), the demand is changing. The first users were ready to take risks, and to take on part of the effort of integration and implementation. The second group is very pragmatic. They want solutions that are more "off-the-shelf", which function immediately, with other users to refer to, full support, etc.

While customers appreciate the shared nature of Open Source developments, they have fully understood that the size, recognition and power of the communities were the determining elements in the success of their solutions. This is pushing Open Source players to organize themselves differently. We are seeing a movement of consolidation and vertical integration which is accelerating among the major communities, distributions and

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alliances (Apache, Eclipse, Novell, Mandriva, OSA, OW2, Red Hat...). With Open Source publishers now being very marketing-oriented (just like in the automotive market, where we have moved from the era of mechanics to that of designers) and increasingly developing product ranges marketed under dual licensing agreements (eXo, Talend, JBoss, EBM). In addition, of distribution and integration ecosystems are becoming ever wider. A good example is the recent appearance within the marketplace of Red Hat Exchange and the SourceForge.Net/MarketPlace, with the aim of simplifying access to service providers around their solutions.

And, of course, you need to take into account the increased positioning of IT services companies as global integrators and Open Source consultants. Bull is an important pioneer in this area, and is now a major player with its Open Energy offering, its involvement in the OW2 consortium, membership of the international System@tic competitiveness cluster, and commitment to the FNILL.

Finally, over and above those Open Source providers, we are seeing some very significant changes when it comes to the users, with increasingly powerful user communities: a fundamental trend.

What form does this increase in users' power take?

At the same time as the Open Source market is reaching a high level of matu-

riety, and in the process of being adopted by the majority of users, we are also seeing that having conquered the infrastructures, or "middleware", it is now targeting business applications. And this is leading to a very interesting movement: the emergence of communities of business-oriented users seeking to share technological developments and capitalize on them. This movement has already begun, with IDABC in Europe, AdminSource and Adullact, ACube and Improve Foundations in France... It is taking shape and gathering speed, particularly in the areas where users have an interest in sharing certain developments or business standards. This is, of course, the case with public services (government ministries, local and regional authorities, health and social services) but these strategies are also appearing in telecommunications, industry and finance. After all, who better than a consortium or an Open Source community managed by the users themselves to respond to business problems?

Is this movement a kind of blueprint for the next round of changes?

For my part, I am convinced that it is a major trend in Open Source. Increasing professionalization is obvious; it is a prerequisite for adaptation, a Darwinian phenomenon, and nothing more.

The rising power of user communities is the new counterbalance for this infatuation with Open Source because it offers

users access to an approach to development that they value. This is made possible by the shared nature of licensing, because it gives them a share of the independence hitherto closely guarded by publishers, and because it enables them to reduce costs and timescales while capitalizing on and sharing a part of their development workload.

Their challenge is to get access to the tools that enable them to unite these communities, combining the openness of collaborative development environments and secure industrial resources (for project management, capitalization and receipt), that are well-suited to the world of the enterprise. Hence the inevitable development of appropriate software forges. Bull is a pioneer in this area, with its NovaForge™ platform. NovaForge integrates and offers the best of Open Source technologies in this domain. It is in this spirit and in the continuity of our vision that we have opened up NovaForge.org to the user community, contributing to greater transparency for the greater benefit of our customers.

(1) FNILL : the French Open Source software industry federation

(2) AFNOR: the French association responsible for IT standards

(3) Saugatuck Technology, *Risk to Open Source Users and Vendors*, August 2007

(4) Saugatuck, *Open Source: The Next Disruptive IT Influence*, October 2007

OPEN SOURCE

OW2 releases JOnAS 5, a new-generation dynamic application platform for mission critical computing

The first Open Source platform offering:

- Breakthrough flexibility for tomorrow's dynamic SOAs with unique OSGi™ architecture
- Easy application development and deployment through smart Java EE 5 support
- Ultimate scalability and high availability, with autonomous clustering management

OW2, the leading consortium in Open Source middleware, is today announcing the release of JOnAS 5.0, a new-generation release of its flagship application server.

Already deployed in production for thousands of enterprises and government applications worldwide, JOnAS 5 represents a breakthrough in application platforms, fulfilling the needs of organizations seeking to deploy open and robust Java application services while preparing for tomorrow's flexible Service-Oriented Architectures (SOAs).

"Dynamic SOAs are the cornerstone of the flexible, self-adapting information systems of tomorrow." declared Cedric Thomas, CEO, OW2. *"By providing the first Open Source dynamic application platform, with mission-critical grade scalability combined with the OW2 rich solutions ecosystem, we now offer the ideal platform for helping businesses build their SOA applications for today while preparing for the future."*

A new-generation application platform

A breakthrough in JOnAS development, JOnAS 5 incorporates many innovations, combining research from the members of its development community across Europe (Bull, France Telecom, INRIA, LIFL, UJF, UPM...), Asia (CVICSE, Peking University...) and America (UNIFOR...). The objective is prepare for the dynamic SOAs of the future, while solving today's enterprise needs for mission-critical scalability and availability. As a result, JOnAS 5 offers:

- Breakthrough flexibility for SOAs, with unique OSGi™ architecture. The first Open Source application server fully based on OSGi™ architecture and technology, JOnAS 5 offers a new-generation

approach to application servers. Completely rewritten to be based on OSGi™ modules, JOnAS 5 implements a service-oriented architecture in the application server itself, enabling the server and its services to be dynamically adapted and extended depending on users' needs and the constraints of their environment. As a result, with JOnAS end users benefit from a breakthrough modular and flexible platform, that can be dynamically adapted to their needs, upgraded without interruption of service, extended on the fly with new services and opened up to the multitude of third-party services from the OSGi™ world, such as RFID. Thanks to JOnAS 5, the OSGi and Java EE worlds will be able to share services.

- Easy application development and deployment, through smart Java EE 5 support. With Java EE 5 compliance and complete integration with OW2 EasyBeans technology (EJB3), JOnAS 5 offers simple development, integration and deployment features. JOnAS 5 leverages the "ease of development" features of Java EE 5 by providing additional facilities. In particular, the EasyBeans EJB3 container provides automatic reloading of classes and a faster development and deployment process. Large-scale deployments are also simplified with a smart and reduced API capable of downloading higher level APIs from the server. As a result, end users and developers can easily design, distribute and run their Java applications with low Total Cost of Ownership (TCO).

- Ultimate scalability and high availability, with autonomous clustering management. As a result of the associated OW2 project JASMINe, JOnAS 5 now offers the most advanced cluster configuration and management tools in the Open

Source world today. Dynamic clustering, load balancing and replication are ensured. It will also enable autonomous behavior, with self-repair and self-optimization according to set management rules. As a result, JOnAS 5 offers the perfect Open Source solution to organizations wishing to deploy highly scalable and available application services for mission-critical applications.

An open foundation platform for dynamic Service-Oriented Architectures

As one of the cornerstones of the numerous middleware solutions delivered by the OW2 consortium, JOnAS is at the heart of OW2's new "Reference Architecture". It is a foundation of OW2's rich solutions ecosystem, which includes advanced portal solutions (such as the Exoplatform portal), ESB solutions (including Petals Enterprise Service Bus) and business process management solutions (combining the Bonita XPD workflow manager and Orchestra BPEL solution), among many others.

"JOnAS 5 is a fundamental milestone in the development of JOnAS," concludes François Exertier, R&D Manager at Bull and JOnAS project Manager at OW2. *"It embodies the mission and the values of our community: combining the open innovations of a large international community – including some of the leading IT research organizations in Europe, Asia and America – and our commitment to provide a platform for mission-critical computing. By introducing breakthrough modularity with OSGi™ architecture, we are providing a modular platform that can be easily complemented by third parties. It will also be well suited for Java EE 6 profiles. We call on other Open Source communities and ISVs to join us in our efforts, and to add contributions to this open platform."*

More information on the JOnAS project Web site:

<http://jonas.ow2.org>

to be continued on page 12

(CONTINUED)



▼ About OW2

Founded in January 2007 as a result of the merger of ObjectWeb and OrientWare communities, OW2 is an independent industry consortium dedicated to developing Open Source code middleware and to fostering a vibrant community and business ecosystem.

Building on the legacy of ObjectWeb and OrientWare, OW2 brings together more than one hundred organizations and 6,000 developers in Europe, Asia and the Americas. OW2 hosts over one hundred technology Projects, including Lomboz, Funambol, eXo Platform, XWiki, SpagoBI and JOnAS. Several of these projects are combined into market-driven Initiatives, such as the ESB/SOA Initiative and the Business Intelligence Initiative, which facilitate their implementation by systems integrators, OEMs and end-users. A typical global Open Source organization, OW2 aims to bring together grassroots communities across all continents through Local Chapters.

More information about OW2: <http://www.ow2.org>

SERVERS

Bull strengthens its Bio Data Center offering with a new NovaScale blade server

Energy efficiency with quad-core processors and SSD discs

Enhanced availability thanks to innovative storage technology

Bull launched the NovaScale® B260LV (Low Voltage) blade server, designed to cut power consumption for IT infrastructures while boosting their availability. This new server strengthens Bull's Bio Data Center offering, aimed at combining flexibility, performance and sustainable development within the Data Center.

The new NovaScale B260LV blade server features Intel® Xeon® L5335 quad-core processors, reducing electrical consumption by 40% compared with traditional processors, as well as SSD type (Solid State Disks) discs that reduce energy consumption by 87% in comparison to classic storage solutions. The NovaScale B260LV blade server is ready to feature Intel® Xeon® 5400 processors in order to protect investments.

The NovaScale B260LV blade server is particularly well-suited to demanding environments in terms of cooling facilities, floor space and high levels of performance. Integrated in a high-density, optimized chassis, it provides the ideal platform for Web 2.0 infrastructures as well as for rationalizing and simplifying the Data Center.

Advantages of the NovaScale B260LV server

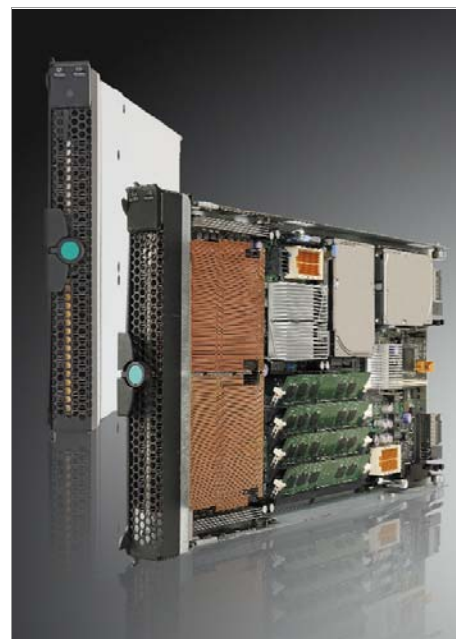
- Considerably reduced power consumption
- Unrivalled performance/watt ratio
- High-level availability with SSD discs
- Lower total cost of ownership thanks to rapid R@ck n'Roll deployment and easy management with NovaScale Master

Price and availability

Price of a NovaScale B260LV configuration with 2GB of memory, one Intel® Xeon® L5320 processor and a 16GB SSD disc: €3,270 (list price).

Available immediately.

** By way of comparison, the Bull NovaScale B260LV server consumes 16% less electricity than the HP BL460c blade server that has identical characteristics (Source: HP Bladesystem sizer V2.8.1).*



TELCOS

Open Source, at the heart of Bull telecommunications projects

In order to reduce costs while also delivering flexible solutions, Bull is integrating more and more Open Source components in projects aimed at its telecoms operator customers. In effect, whether it involves adapting to meet the sudden increase in workload created by introducing a new service, or adapting new services in response to marketing requirements, the flexibility of the solution determines just how flexible the operator can be when reacting to its competitors.

// By way of illustration, I want to tell you about three quite different applications," Christian Giusti, Director of Bull Telecommunications & Media operations in France explained to us. "The first involves an innovative postal mail application, the second a mobile phone/Internet interface, and the third enables remote management of network equipment deployed by private individuals. When it comes to electronic stamp, our services meet the Electronic PostMark™ (EPM™) standards set out by the Universal Postal Union (UPU). Bull's solution uses Linux Red Hat, Apache, JOnAS, Axis, MySQL and PHP 5. For our MMS (Multimedia Messaging Service) gateway solution, Bull has recently developed new functionality and put in place a new administration site that mainly uses PostFix. Finally, the remote management system for private individuals' network equipment integrates around the software publisher's own management solution, the Resin Professional J2EE application server, and the PostgreSQL cluster database. In each of these instances, Bull gives the operator the benefit of our experience as an IT maker, combined with our knowledge of Open Source to provide a single point of contact for maintenance, support and high availability of solution components. The other advantage for the operator is that they have access to a scalable solu-*

tion from the moment the service is launched, and so avoid paying repeatedly for the various different stages in its growth."

* Bull Telecommunications & Media Business Unit

delivers solutions worldwide and has established several centers of expertise and software development in France (in Paris region, Grenoble and Bordeaux), as well as in Morocco, Poland and Brazil.

▼ Success story: handling shared services for an IP provider

Bull has developed a platform of shared services, using JOnAS, AIX 5.3 and Oracle 9.2. Initially designed to support the launch of a new IP operator – where it proved its worth by supporting the business through its amazingly successful start-up phase – this platform now gives Bull a key component that can be re-deployed in similar integration projects for other operators' information systems. The JOnAS applications server consists of two dedicated interfaces that provide links with the CRM (Customer Relationship Management) system on the one hand, and the billing and provisioning system on the other. The Shared Services platform handles all exchanges of data flows relating to orders and deliveries, subscriber information (including account and consumption details), services offered, bill generation, outstanding payment collection and resources assigned to a service. The solution is scalable and enables new data flows to be rapidly integrated.

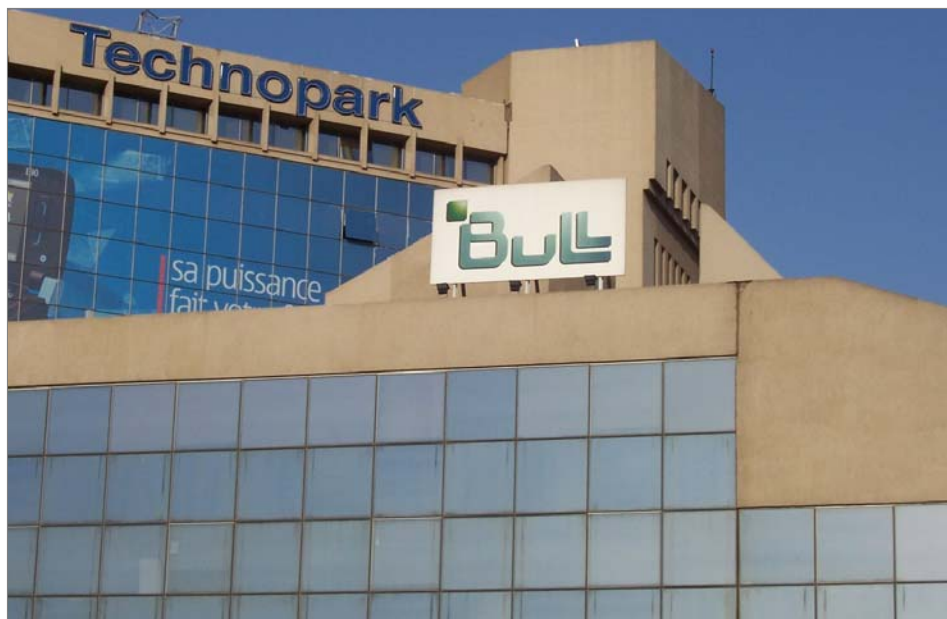
In addition, Bull can draw on its teams of Open Source experts at Grenoble in France, when it comes to support. Thanks to this approach, the Group can shorten the application development life cycle by using a comprehensive environment for development, assembly, testing and implementation. The resulting, secure solution offers guarantees when it comes to information system maintenance at an operational level. Running costs are reduced thanks to a built-in automated management system that limits the need for human intervention.

Finally, a series of tools accessible via a Web console (NovaForge Web client) and an Eclipse client (NovaStudio) provide services for the design, automated code generation, application composition, and configuration of component parts making up the infrastructure.

DEVELOPMENT

Bull Services center in Morocco: expert in Open Source, telecommunications and e-government

Last April, Bull announced an agreement with the government of the Kingdom of Morocco to open a Bull Services Center in Casablanca.



// This new services center will be dedicated to prime contractor and systems integration projects in the telecoms and e-government sectors, areas where Bull Morocco can capitalize on its recent achievements to become a market leader in the field," commented Didier Lamouche at the launch.

The Bull Morocco Services Center aims to offer the services of its dedicated development teams on French or Spanish-speaking projects outside Morocco. With skills focus on J2EE, Open Source and telecommunications, the established team is already working on a number of specific developments,

third-party application maintenance and migration projects. The Services Center integrates seamlessly into the Bull Services Center network to offer a high level of geographic and cultural proximity: a shared working language (French), negligible time difference and a NovaForge/NovaStudio development environment on hosted in France.

The Services Center draws on Bull's know-how in Morocco, proven on high-profile major projects. These include the restructuring of the Customs information system and Taxation system, the installation of a complete information system for a telecoms operator based in Morocco, and the development of a 100% Open Source portal for the country's local government authorities.

With 200 new jobs due to be created between now and 2009, the Morocco Services Center has ambitious objectives for growth. It will contribute to extend Bull's range of services and its international development.

Roma, January 16-17

QualiPSo Conference 2008



Faithful to its aim to foster the development and use of Open Source Software (OSS) to help industries in the global race for growth, on 16 and 17 January 2008 the international QualiPSo consortium is organizing its first international conference: *"Fostering trust and quality of Open Source software systems"*.

Organized in Rome, under the patronage of the European Commission, the QualiPSo 2008 conference will bring together international authorities and experts on OSS trends, reveal the first results of research carried out by the QualiPSo consortium, and be a forum for debate about the drivers for encouraging trust in OSS. It will approach Open Source from three complementary angles: political, economical and technological, covering:

- Business models and strategies in OSS
- Legal issues in Open Source
- Trustworthiness of OSS products and processes
- Interoperability in the area of Open Source
- Networks of OSS Competence Centers
- Next-generation software forges.

"More than ever, major industry and government players today consider Open Source as part of their strategic IT sourcing portfolio," declared Stefano De Panfilis, Chairman of the QualiPSo consortium. *"Nevertheless, there is still some reluctance about widespread adoption of OSS, mainly due to lack of confidence. The "grey areas" of OSS that cause major concerns to industry are mainly focused on legal and quality aspects, and business issues. A first in the industry, this two-day conference will focus on the solutions to these challenges."*

Founded by a heavyweight group of ICT industry players including Bull, SMEs, governments and academic institutions across Europe, Brazil and China, QualiPSo is an international consortium that aims to help industries and govern-

ments define and implement the technologies, processes and policies that facilitate the development and use of Open Source Software components with the same level of trust traditionally offered by proprietary software.

The conference will enable IT executives, public sector bodies, policy makers, software project managers, IT architects and OSS community members to assess the opportunities for adopting OSS as part of IT strategies; reach out to professionals involved in OSS; and share experiences about OSS. It will also enable attendees to get involved in the definition of next-generation tools and process addressing trust factors in OSS. Last but not least, it will announce the creation and launch of OSS Competence Centers designed to help industry adopt OSS worldwide.

For more information and registration, visit:

www.QualiPSo.org

Paris, January 29-31

Linux and Open Source solutions 2008

Host to more than 10,000 visitors, the "Linux and Open Source Solutions" exhibition is a major event dedicated to the world of Linux® and Open Source software and applications.



With the European leader in Open Source Software services and its experts, discover the revolution of open Information Systems, through a number of conferences::

On January 29

• **Ahcène Latreche** → Service quality management with Open Source: the maturity of the solutions at the light of ITIL and CMMI approaches.

On January 30

• **Guillaume Forestier** → NovaForge: a development industrialization platform based on open source components.

• **Miguel Valdès Faura, Bull & Tom Bayens, JBoss Red Hat** → *The Process Virtual Machine: a revolutionary technology for BPM.*

• **Rodrigue Le Gall** → eXo WebOS portal and content management with Java.

• **François Exertier** → JONAS 5: a new generation application server.

• **Benoît Pelletier** → JB3 easy clustering with JOnAS and EasyBeans.

• **Benoît Pelletier, Bull et Laurent Ruaud, Serli** → JASMINe 1.0: facilitate administration of JOnAS Java EE clusters and SOA platforms.

Bull will also be exhibiting on its booth and on OW2 booth its Open Energy™ family of Open Source services, NovaForge™, the first comprehensive shared platform for project management and distributed development projects based on Open Source software, new middleware and its NovaScale® servers running Linux.

Find out more about the event:

www.solutionslinux.fr

Angers, February 5-6 2008

CUBE (Bull European User Group) GCOS 7 study days

GCOS customers who are members of the Bull European User Group (CUBE) will have the opportunity to visit the Angers manufacturing site and Bull's outsourcing data center at Trélazé on 5 and 6 February next year. The agenda for these two half-days is as follows:

Angers, February 5

- 14.30 pm: Presentation of the Bull Angers manufacturing facility by **Vincent Sarracanie**, Director, Bull Manufacturing.
- 15.15 pm: Tour of the manufacturing facilities.
- 16.00 pm: Break.
- 6.15 pm: GCOS strategy and offer by **Jean-François Bauduin** and **Michel Méron**, Bull Products and Systems.

- 17.00 pm: 2007 case studies.
 - **CNAF**: Deployment of NovaScale 9000 systems.
 - **GSIT**: Inter-bank transfers in France with NovaScale 7000.
- 18.30 pm: Conclusion.
- 19.30 pm: Dinner

Trélazé, February 6

- 8.30: Presentation of the Outsourcing Data Center by **Philippe Pauty**, Director of Bull's Data Center.



- 9.15: Administering and supervising Data Center systems, presented by **Philippe Martinet**, Bull Services.
- 10.15: Break
- 10.30: Tour of the Data Center.
- 11.30: Securing an IP network environment.
- 12.15: Conclusion
- 12.30: Lunch.

Paris, February 19

New breakfast seminars on Open Source

Each month, Bull offers an open invitation to its breakfast-time seminars, each focusing on a theme linked to implementing Open Source software.

Led by experts ready to share their experiences as regards methodologies, tools, solutions and best practices, these morning sessions offer pragmatic solutions to IT managers seeking to integrate Open Source software in their information systems.

Five new breakfast seminars for the first half of 2008 :

- February 19 → BI: is Open Source now mature?

- March 18 → Web 2.0: RIA-RDA, Ajax-Flex, what is the best choice?
- April 15 → PHP6 and the industrialization of PHP developments
- May 20 → SOA synergies and Open Source
- June 17 → NovaForge™, the Bull platform combining the best open technologies to help automate and structure application development

For more information:

<http://www.bull.com/fr/mornings>



Hanover, Germany, March 4-9

CeBIT2008

CeBIT is the biggest trade show for the ICT sector worldwide, with nearly half a million visitors in 2007, including 8000 journalists from across the globe reporting on the cutting-edge developments and the future of the digital world.

Evidian, a Bull subsidiary, will be present on the Microsoft booth in the hall dedicated to security. Discover our identity

and access management solution, Evidian IAM Suite, and talk to our specialists.

More information: www.cebit.com

Paris, March 11

CUBE seminar: Virtualizing IT infrastructures



Energy consumption control, installations optimization, simplified administration, service continuity, flexibility... IT infrastructure evolution is no longer being driven by cost reduction alone.

In this context, virtualization certainly provides clear advantages. And yet, its implementation remains complex, and requires confirmed expertise in virtualization technologies.

Bull as IT maker, systems integrator and

outsourcer for large systems, has been developing, integrating and utilizing these technologies for many years: to design advanced systems, establish methods and tools for production management, and run its outsourcing business.

It is the cumulative experience gained from both centers of competences and production sites that Bull experts will share with you on the occasion of this seminar together with first- customers testimonials.

Munich, Germany, April 22-25

2nd European Identity Conference

For hundreds of Identity Management professionals, the European Identity Conference provides an unbiased source of new insights and ideas on a broad scale from business-oriented briefings to

hands-on like workshop sessions, with a great number of best practices presentations from real world deployments. With its community-like social networking and knowledge sharing opportunities, the

European Identity Conference has become an annual must-attend event.

Evidian, a Bull subsidiary, will be showing its solutions for Identity and Access Management.

Phoenix in Arizona (USA), May 6-9

Bull Summit 2008 Conference

Rapid response to new business initiatives, increased technical complexity and heightened time and budget constraints continue to place unprecedented pressure on organizations. IT executives must stay focused on the urgent, immediate needs of running their operations while looking to the future, where new and emerging technologies will pose a different set of opportunities and challenges.

These are just some of the issues that will be addressed at Bull's Summit 2008 Conference, scheduled for May 6-9, at the Pointe Hilton Tapatio Cliffs Resort in Phoenix, Arizona.

Attendees at Summit 2008 will hear from IT Industry speakers, Bull Customers from both the U.S. and Europe, and Bull Partners who will share their views on how IT organizations must adapt to

address changing business and public sector needs and the evolution of information technology. Bull customers, prospects, distributors, and partners from the United States and International locations will hear about Bull's future strategies and how the company is positioned to meet the changing needs of its customers.

Details on Summit 2008 will be available in January, at the Bull Web site: www.bull.com/us

Dresden in Germany, June 17-20

ISC2008

The International Supercomputing Conference (ISC) – the largest supercomputing event in Europe – will once again be held on June 17-20 at the Dresden International Congress Centre in Germany. The exhibition will gather over 80 of the world's leading supercomputing

companies and organizations, which will showcase their high performance computing, networking and storage technologies.

The four-day conference features a mix of research presentations and talks on business and industrial topics.

The eagerly-awaited TOP500 list will also be announced.

Meet our experts at Bull booth and see our latest HPC solutions at work on a Bull NovaScale® cluster!

More information: www.isc08.org



