

Bull Direct



Bull's monthly newsletter

EDITORIAL

Information technology: providing powerful leverage in government and business dynamics



No-one would argue that today information technology is at the heart of innovation and performance, when it comes to governments and businesses alike. The President of France himself underlined this fact when he recently visited the French Atomic Energy Authority (the CEA), which operates Europe's most powerful supercomputer – designed, manufactured and implemented by Bull.

Last week, we brought together management and experts of some of Europe's largest public and private sector research centers, to share with them our vision that Europe needs to be much more ambitious in investing in computing power and creating a strong industry in the eminently strategic field of High-Performance Computing (HPC). Because in the near future not only industry but also services and the public sector really will need phenomenal amounts of computing power. As you know, Bull is playing a central role in European research projects, and is heavily involved in the System@tic world-class competitiveness cluster (*pôle de compétitivité*), with our FAME2 project aimed at developing the supercomputers for the decade to come: the successors to the CEA's TERA-10, that will enable the pace of innovation to accelerate in areas as diverse as manufacturing industry, healthcare and climatic research, to design the next generation of airplanes, simulate the human body or even anticipate cyclones. In the weeks ahead, we will be meeting with politicians and public-sector decision-makers at the World eGov Forum in Paris. This will give us a great opportunity to discuss issues of competitiveness and national and regional sovereignty with them, and the role that IT-enabled tools will play.

Thank you again for taking the time to read Bull Direct. I hope that in doing so, you are increasingly convinced that Bull is the best alternative and the safest pair of hands for your most innovative and complex projects, such as those we showcase in this issue for the telecoms operator Maroc Connect, the citizens' card in the Polish town of Rybnik or the Bulgarian Health Ministry.

Didier Lamouche,
Chairman and Chief Executive Officer

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EXECUTIVE OPINION

Jean-Pierre Barbéris,
General Manager of Bull's Services and Solutions business

" Bull, architect of an open world and champion of best practices "

Information systems performance is one of the main factors when it comes to the dynamism of local governments. Bolstered by this belief and its in-depth knowledge of local authorities' issues and constraints, Bull has developed a range of tools and services dedicated to meeting the new challenges they face, including skills transfer, cost management and service quality monitoring.

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BUSINESS NEWS

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It seems that, today, the local government market is one of the most dynamic when it comes to investing in new information technologies. How do you explain this trend?

The growing power of New Information and Communications Technologies (NICT) in local government is first and foremost linked to the role they play in the dynamism of their area. From now on, IT and telecoms infrastructures act as drivers for development in just the same way as transport infrastructures: roads, airports, rail lines. The real challenge, at a time when local authorities are integrating a growing range of skills, is to guarantee the best quality of services to both the existing population and those who might want to come to the area: and that involves, most importantly, optimizing information systems. At the same time, investment in IT is looking like an essential prerequisite for effective local authority management, both in terms of financial indicators and HR management tools. Local authorities are no longer simply talking about offering higher levels of service; now it's all about seeing through their public policies and demonstrating results, all the while respecting the need to control costs.

How much of Bull's business is accounted for by your work with local authorities?

Bull carries a great deal of weight in this sector. The company gets 40% of its revenues from the public sector, and local authorities alone account for a third of that business.

Doesn't Bull's historical role in the public sector in France mean that it's restricted to that market alone?

That picture certainly doesn't match the current reality of Bull's business. Over 50% of our revenues now come from

outside France, and the public sector accounts for about the same proportion of our business in all the countries where we operate. And not just in Europe, of course, but also in the USA, where we work on numerous Medicaid projects in many States, including New York. We have a particularly strong presence in Central and Eastern European countries, where we have been modernizing their customs and taxation systems, as well as in South America, Africa and the Middle East. Our experience outside France has made a significant contribution to enhancing our skill base, particularly in change management.

What are the main differences that you see at Bull between the policies followed in France and elsewhere?

Before I talk about the differences, it's important to note that technological evolution is leading to a degree of convergence when it comes to policies. In real terms, the objectives seem to be increasingly similar and the differences are more in terms of how far projects have advanced and organizational models have changed. So we see that the Anglo-Saxon and Northern European countries are much more open to outsourcing and the number of 'shared service center' projects is growing rapidly. Elsewhere, there is a line separating traditionally centralized countries and those that have put in place a highly decentralized system of government. In that context, it isn't relevant to isolate Mediterranean European, which would be behind the highly advanced Northern Europe. In the same way, the UK makes great use of outsourcing, while maintaining a strongly centralized organization based around large regions, whereas Italian local

authorities do not often sub-contract, although they are well ahead when it comes to decentralization. What's more, we must not forget that some of Europe's major regions have seen their workforce grow by 50% or more in just a few years, whereas others have tended to stabilize.

As a consequence, what are the common trends across all countries?

Logically, one of the main trends involves improving the effectiveness of long-term public policy initiatives, from the point of view of the funding and workforce allocated to them, as well as the management of social grants. Above and beyond this, we are starting to notice sustained and significant growth in Open Source, which is explained both by the need to ensure the openness of information systems and to control costs. Another constant factor is business intelligence and the need for new performance indicators, which enable the effectiveness of local government activities to be constantly monitored. I should also mention the development of regulatory frameworks that, in particular, mean that security is becoming absolutely unavoidable. In the same way, the "shared service center" model for back-office activities is becoming much more widespread, especially in France, where groups of local government bodies are increasingly joining forces on these kinds of projects.

What added value does Bull offer to help local authorities meet these challenges?

The first thing is definitely that we fully understand local authorities' objectives and the challenges they face. We believe, like they do, that IT should both contribute to the dynamism of local government and help the authority manage its spending and provide useful decision-support tools. That's why Bull Management, our consulting division, is so important to providing change management services and identifying the most appropriate tools to support business decision-making. Bull also offers four other kinds of services and products

EXECUTIVE OPINION (CONTINUED)

to the local government market: from systems integration to outsourcing, security to IT infrastructure solutions.

In all cases, Bull is organized in such a way as to share local authority objectives. That's certainly the case with our well-respected and proven Coriolis software suite for local authority financial management. We have also stayed one step ahead in terms of the growth of Open Source, particularly with the development of our two dedicated services centers in Grenoble and the Provence-Alpes-Côte d'Azur region of France, the latter being specially focused on the local government market, through our "Open City" package of services. When it comes to IT security, our expertise extends from the implementation of electronic signatures, to the design of business recovery plans and video surveillance management.

In the same spirit, Bull has developed mobile workforce solutions especially for

local government, such as waste collection route optimization or traffic congestion solutions.

Finally, experience shows that itself Bull is seen by its customers as being at the cutting-edge. Our understanding of the public sector and widespread presence means we can anticipate the development of skills transfer. The upstream work we are carrying out for various ministries and central government departments puts us ahead of the game when it comes to understanding governmental programs. From that point of view, our close relationship with various public sector bodies is a major asset.

In real terms, what kinds of local authorities does Bull work with?

Bull works extensively with medium-sized and large local government bodies, whose needs match closely with the products and services we offer. On the ground, our role is to be that of a

champion of best practices. The local authority sector seems to be both very specialized and fragmented. The growing competition between different local governments naturally generates new benchmarking requirements, although at the same time many local authorities are convinced about the need to share information with each other. Behind that apparent contradiction, there appears to be a common logic that is leading to a growth in shared services centers and shared hosting of information systems. In fact, the targets that local authorities are setting themselves – in terms of service quality and availability, increasingly 24/7 – makes it very difficult, indeed almost impossible to achieve in-house. And that, in reality, is increasingly part of Bull's core business.

Interview translated from the CIO French publication, in an issue dedicated to the public sector

HOT TOPICS

French President salutes the TERA-10 supercomputer

During his visit to the French Atomic Energy Authority (the CEA) in September, the President of the French Republic, Jacques Chirac, declared that: *"with the completion of TERA-10 by the Bull Group, France has at its disposal the most powerful computer in Europe; and more widely, on the technological front, is easily on a par with the United States and Japan. We occupy one of the leading positions in digital simulation worldwide."*

Just as a reminder, TERA-10 is the supercomputer that enables the CEA to simulate nuclear tests, thus avoiding the need for full-scale trials in the natural environment. The computing power of TERA-10 is also available to the scientific



research community, particularly in areas such as earthquake prediction, decoding human genes, and predicting climate

change. It is capable of processing fifty thousand billion operations a second.

BUSINESS NEWS

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In the course of 2006, Maroc Connect is launching a new telecoms operator business in Morocco offering broadband Internet access and telephony services to both business and private customers. Basing their new services on latest generation technologies, Maroc Connect is aiming to gain a significant lead over the principal market players.

Following a series of international tenders, Maroc Connect has chosen Bull:

- Firstly, to build its OSS and BSS (Operations and Business Support Systems) information system
- Secondly, to provide a value-added services platform for its network, which will handle pre-paid services, voicemail and an interactive voice system.

"We have entrusted Bull with the implementation of our information system because of their reputation for expertise in integrating complex telecoms systems. In addition, we are banking on reaping the benefits of Bull's experience in designing innovative solutions for our future services platform. Their real

understanding of what we need, plus the local back-up and support they provide, were decisive elements in our decision," explained Karim Zaz, Maroc Connect's Chairman and CEO. *"As the premier private Internet access provider, and leader of managed business network solutions, Maroc Connect intends to consolidate its lead in the NICT market by pursuing its policy to innovate to the benefit of its customers."*

Under a contract worth several million euros, Bull is responsible for designing the IT architecture, a number of specific developments and integrating all the components of the solution. These include products from various partners: the

Highdeal Transactive invoicing suite, Comptel for the OSS, Oracle PS 8 for the CRM and StreamWide for the value-added services. The Moroccan integrator CAP'INFO is supplying a management solution based on Oracle Application, as Bull's co-contractor.

"By supporting Maroc Connect's innovative initiative, Bull is both confirming its position as an agile and robust innovative player in the industry, and pursuing its strategy for strong growth in the telecommunications sector," asserted Jean-François Leprince-Ringuet, General Manager of Bull's Telecommunications & Media business. *"In real terms, this project – which has also benefited from the contribution of AMG.net, Bull's new Center of Competence in Poland – is in perfect alignment within our international development strategy. For our Telecoms center of competence in Morocco, this represents an important landmark."*

BUSINESS NEWS (CONTINUED)

Bull implements the CitiCard for the town of Rybnik in Poland

In the Polish town of Rybnik (140,000 inhabitants), a new integrated IT system gives citizens fast access to information, a more efficient way of dealing with public institutions and a convenient way of using public services. The system is based around the concept of CitiCard, a 'citizens card' that enables people living in Rybnik to carry out various transactions at any of the town's network of info kiosks and other public service points.

The key part of the system is the CZD module. Its role is to store information about CitiCards and users' personal data, and to settle accounts for any transactions done with CitiCards, which act as an 'electronic purse' for the holder. Every CitiCard in use has to be registered in the system. People can buy and customize their CitiCard at one of the "personalization points" located across the whole town. At those points, users can also load

essential applications such as:

- Electronic purse
- Electronic signature
- Single journey public transport tickets
- Multiple journey public transport tickets
- Season tickets for city center sports and recreation facilities.

Holders of an electronic purse can "reload" it with a specific amount of money at a point-of-sale terminal or even

a parking meter! They can then spend this money on a single journey on public transport, to buy time on a parking meter or even to pay in the town's market. They can also buy entry tickets to sports and recreation centers.

The electronic signature facility is used when "signing" documents sent to the Town Council in electronic form, via the "Virtual Office" sub-system, accessible to any citizen with Internet

access (via public points such as Telecenters or Infokiosks, as well as private ones). Users need the electronic signature application loaded onto their CitiCard in order to use the range of Virtual Office functions.

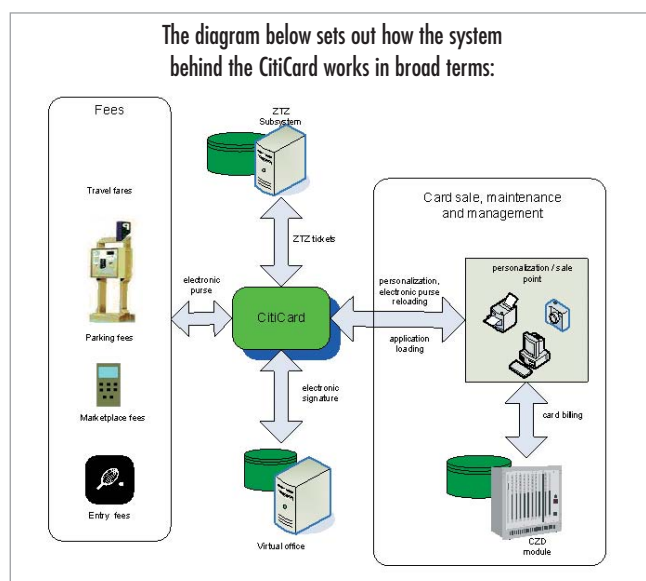
The ZTZ is another sub-system that supports the maintenance and administration of the town's public transport system. If a citizen has a CitiCard with the Electronic purse, he or she can pay a fare for a one-off journey. On the other hand, if the citizen card is loaded with a pass for multiple journeys he or she can pay additional fares, for example for an accompanying passenger, luggage or animals.

Bull, architect of an open world and builder of flexible and secure information system

Bull has been chosen by the city of Rybnik to implement its citizen card. The contract value is 1.1 million euros funded by UE.

Bull Poland ensures:

- System integration (card and user management, PKI, electronic purse, etc)
- Project management
- Business analysis and consulting
- Central management and clearance system development
- Java smart card applications development and provides the infrastructure based on Bull NovaScale servers.



BUSINESS NEWS (CONTINUED)

New NHIF information system to enhance quality and efficiency of management and funding of Bulgarian health system

On 14 September, the Bulgarian Minister of Health, Professor Radoslav Gaydarski, and Jimmy Char, General Manager of Bull Bulgaria and manager of the consortium, signed a contract to implement a new, integrated information system for the country's National Healthcare Insurance Fund (NHIF).

The launch of an operational NHIF's information system is critical for the development of the healthcare insurance system in Bulgaria. Transparency and better control over the efficient use of financial resources in the healthcare sector will be guaranteed and will contribute to improving the quality of the health services offered to the citizens of Bulgaria.

The NHIF information system is part of the larger Healthcare Sector Reform Project, funded by a loan from the World Bank to the Bulgarian government. The contract is worth euros 3.5 million and the system is

due to be implemented in 21 months, by a consortium led by Bull Bulgaria and including SIVCO Romania, a leading Romanian IT Services company, and Maccabi Healthcare Services, who will act as a business consultant to the consortium.

The tender for the new, integrated NHIF information system was managed according to international protocols specified by the World Bank. Six companies replied to the call for tender: Bull, HP, IBM, Intracom, Oracle and Siemens Business Services. A two-stage evaluation and selection process was completed by the World Bank and Bulgarian legal experts.

The project will involve implementation and integration of two inter-connected information systems: a system for planning and spending financial resources, and a claims management system:

- **The first system** is a standard back-office system dealing with all the NHIF's

central and regional administrative operations. It will be used to manage, account for and control budgets, and supervise debts and payments. This will help to enhance overall control and ensure more efficient management of NHIF funds.

- **The claims management system** will generate and control the main data bases within the system. These data bases include healthcare providers (doctors, dentists, hospitals, pharmacies, etc.), people with health insurance and drugs. This IS will monitor healthcare providers' activities, to guarantee that people get high-quality service and that providers are paid. In addition, it will also be used to manage the level of healthcare insurance payment installments, as well as to carry out statistical analyses and prepare forecasts.

The two core systems will be supported by various applications, including internal financial control and medical audit.

NovaScale gets high grades at Erie Schools

The Erie Pennsylvania Schools have ordered a Bull NovaScale 9000 server for their school system applications. Erie Schools has been a Bull GCOS 8 customer for more than 20 years.

With over 100,000 inhabitants, Erie, Pennsylvania is the third largest city in the state of Pennsylvania. The city has 20 schools, which include 4 high schools, 2 middle schools, and 14 elementary schools. The City of Erie School District is known for its pro-active implementation of a 3-year technology plan, begun several years ago, which had the objectives of using technology to support student achievement, to expand learning opportunities, and to ensure that all students have equal opportunities to learn.

Erie Schools uses a GCOS 8 system for

its school system applications, including student scheduling, utility usage, and other administrative applications.

Erie's decision to purchase a NovaScale was based on their desire to implement a more contemporary hardware and software platform that would improve the efficiency of their IT operations and provide for future needs. According to Doug Krugger, MIS Administrator for Erie Schools, "We decided on the Bull NovaScale because it will enable us to continue to run our core schools applications with greater power and

lower operating costs, while also allowing us to add an open partition for Microsoft SQL Server in the future to handle the addition of new open applications."

According to Frank Scozzie, Assistant to the Superintendent of Schools, "Redesigning for Success is the motto for the Erie School System. It is a commitment to make every attempt to educate all children, and not select a few. Bull has been responsive IT Partner for many years, and fully understands that our goal is to increase student achievement through enhanced programming so that we can help create a better tomorrow for all of our students."

EXPERT VOICE

Joe Alexander, Director Software Strategy and Chairman of the OSDL/DCL Steering Committee

Open Source: the evolution of communities and business models



Joe Alexander has worldwide responsibility for the software strategy of Bull's NovaScale product line and the product planning and strategic development of Bull's GCOS product line. In fulfilling this role, Joe has leveraged AIX®, Linux®, OSS and Intel-based technology to address the needs of the marketplace by working closely with customers, partners and industry consortiums. In 2004, Joe added to his current responsibility by representing Bull at OSDL (Open Source Development Labs) to accelerate the early adoption of Linux in the Data Center. In March 2005, Joe was elected to the Vice Chair position of the OSDL/DCL Steering Committee. In May 2005, he assumed the Chair position and was reelected in February 2006. Joe is also a Senior Faculty member as an adjunct professor at Keller Graduate School of Management.

Management Summary

Open Source Software (OSS) is transforming the way user organizations and suppliers view developing, integrating, and deploying software. The OSS development methodology began in 1974 with the first collaborative UNIX® and TCP/IP development projects under the BSD license. There is now an alliance between these libertarian movements and commercial communities. With OSS-based solutions now in the mainstream for Enterprise computing, a choice is there for consideration for those that develop solutions and deploy them around the world. Just like the historical PC and Internet revolutions, one must migrate through the myths fostered by those reluctant to participate. To assist you leveraging OSS to your advantage, let's address certain questions.

What is OSS?

OSS is licensed software in which the source code is distributed with the product and the user is able to modify and redistribute derived works from this software.

OSS is not just a development methodology; it is a means for actually delivering the software and for the economic transfer founded on that methodology. Whether in R&D or end-user IT settings, the two primary adoption drivers of OSS are:

- Control of destiny
- Economic factors.

Non-market forces such as governments are driven by these same factors to encourage/demand that OSS be considered and communities be developed within their geographical boundaries. OSS is all about community and collaboration within that community. These communities are characterized by democratic behavior.

There are four primary ways of creating value with OSS:

- Lower licensing and operating costs
- Collaborative Return on Investment (C-ROI)
- Service economies
- Complementary product impact.

A key validation of these values in this the

21st Century is the active participation by large IT supplier such as Bull, HP, IBM, Novell, Oracle, SAP and Sun.

What are characteristics of successful communities?

- Like-minded institutions/individuals with similar goals
- Create a centrally managed, developed project for those institutions
- The developed software does not create a competitive advantage
- "Good enough" rules for initial versions
- The economic sweet-spot is C-ROI
- A democratic structure with accountability, expertise and participation by all
- Process to ensure product maturity, longevity, and support.

OSDL (Open Source Development Labs) is such an example of that structure within the Linux eco-system. It was founded in 2000 by seven global IT leaders that came together to address **shared challenges** in the Linux industry. Today it is supported by more than 75 members representing a global consortium of major Linux customers and IT industry leaders. OSDL is the sponsor of Linus Torvalds, the creator of the Linux kernel and is dedicated to accelerating the growth and adoption of Linux from

enterprise to mobile computing. It is a nonprofit organization that provides state-of-the-art computing and test facilities available to developers around the world. With offices in China, Europe, Japan and the United States, OSDL sponsors legal and development projects to advance open source software as well as initiatives for Linux systems in telecommunications, in the data center, on enterprise desktops and mobile appliances. Bull is an active participant in the Data Center Linux (DCL) initiative and the members have chosen me to be the chair of the DCL Steering Committee. During 2006, OSDL/DCL included the vertical industry of healthcare within its scope. On August 15, at LinuxWorld Expo in San Francisco, OSDL hosted the first ever open source event for the Health Care IT (HCIT) sector. The all-day event drew 90 attendees from across the HCIT ecosystem, including leading ISVs, systems and medical equipment OEMs, healthcare providers and standards organizations. The event goal was to establish a dialog which could ultimately transform the quality, efficiency and economies of delivering global healthcare. The event kicked off with a keynote address by Dr. Ken Kizer, CEO of Medsphere Systems Corp, titled "Open Source and Healthcare." Dr. Kizer



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EXPERT VOICE (CONTINUED)

described the open source opportunity in healthcare and some of the major challenges facing the HCIT community. Another highlight of the day was the final panel session, titled "Building a Global Healthcare Open Source Community." The panelists and audience engaged and together identified some of the key HCIT gaps that open source software could address, along with some specific actions that the OSS community could take to accelerate essential improvements in HCIT. It was my pleasure to be the host for this event, do a presentation, and host the final panel of the day. To view the LWE Healthcare Day program presentations, please visit OSDL Healthcare Day. Visit OSDL on the Web at: www.osdl.org/.

Where is OSS being used?

Open Source Software is being used throughout the software solution stack (infrastructure layer, service layer, process layer) for enterprise computing. The greatest market penetration is at the infrastructure layer through web support, development tools, operating systems, security and databases since that is where initial OSS effort started. Effort has moved up the stack to now include integration and access software as part of the service layer to provide a more seamless view of computing and data. In 2004, many OSS business applications started appearing in the market.

What business models motivate suppliers?

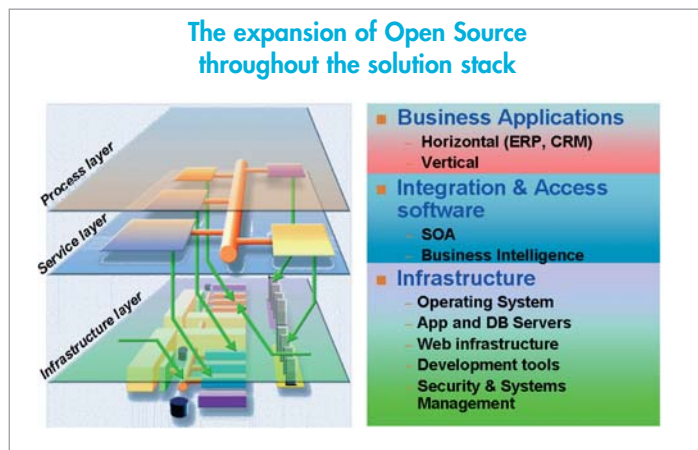
The earliest business model was **selling support and services** around OSS. Companies like Red Hat (Linux), JBoss (Middleware), and Compiere (ERP) began as startups using this business model. Bull is also involved in this model as a contributor and integrator with

several middleware solutions for Service Oriented Architectures (in cooperation with consortiums such as ObjectWeb and others). A popular one for new companies in the last several years is called **mixed** where the company uses on OSS code base with proprietary add-ons. Companies like Sourcefire (security) and SugarCRM (CRM business application) use this business model. Companies like MySQL and Sleepycat (databases) use a proprietary license for the OSS allowing users to modify and redistribute the source without having to make the code changes available to the public. This model is called **OSS + Buy Off**. Other companies have formed that assemble various OSS packages into integrated units that are easier for customers to consume. Companies like Exadel, Navica, SourceLabs, SpikeSource, HP and Bull use the **OSS + Aggregation** business model. Hardware makers use OSS as the foundation for the software that runs their machines. This **OSS + Hardware** business model is used by Cisco, Digium, Netezza and system vendors such as Bull, IBM and HP. Bull has leveraged this approach successfully in the HPC (High Performance Computing Model) market combining Linux, Lustre, NFS, and other solutions coupled with community collaboration. The best example is TERA-10, the N°1 European supercomputer and the 5th in the world that has been built by Bull for the CEA. Relying on Linux, TERA-10 uses 85% of OSS code, 10% of proprietary code (from partners), and 5% of Bull value added code, that has been returned to the community. Last but not least, integrators increasingly make a strong use of OSS software components in the applications they build for their customers. The advantage:

providing solutions that are both open and very cost effective. Bull, with its Open Energy service offer, is among the pioneers and the European leaders in this field.

What is the future for OSS?

It is often said that OSS does not innovate, it imitates. If one looks at the activity of some of the most prominent OSS projects (e.g., Linux, MySQL, PostgreSQL, OpenOffice, etc.) in use in the enterprise today, one might agree. Of course, this discounts that OSS has blazed a few trails that the proprietary solutions followed. The prime example is the Apache Web server. Market watchers say that 62% of all Internet Web sites run Apache today. Apache effectively created the market for Web server software and continues to lead the way. Its success was anticipating demand, providing stability, high performance, great security record, and desired features beyond its commercial competitors. Experimenting the OSS methodology will continue to increase across the software industry by individuals and companies. One reason is because this development methodology allows a software product to grow organically. As Eric S. Raymond observed in *The Cathedral and the Bazaar*, "Every good work of software starts by scratching a developer's personal itch." When a group of developers begin to **collaborate** in an open fashion, each one scratching a unique personal itch, the result is software that expands to fill those functional areas not addressed by proprietary products. The middle ground between OSS and Proprietary, called a "blended" strategy, will continue to grow, in which proprietary components get blended with or actively support OSS products. We



Enterprise utilization rates for Open Source components

Web infrastructure	69 %
Development tools	57 %
Operating Systems	49 %
Security	23 %
Databases	14 %
Integration and Access	11 %
Business applications	9 %

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EXPERT VOICE (CONTINUED)

see that today in the Java world with BEA, IBM and Sun Microsystems.

Linux and other OSS products will see much success in appliances much smaller than the servers and workstations that have traditionally been their focus. Appliance manufacturers have discovered that leveraging embedded software such as Linux, with its OSS advantages, allows for "competitive collaboration" and leaves time to provide competitive advantage higher up in the solution stack.

As the demand for secure software grows, so does the focus on using OSS methodology. As Microsoft users have found, the closed source model has not provided any additional protection and in reality is a magnet to the thrill seeker. A commercial product may have a Quality Assurance (QA) team of several dozen people, but OSS projects with a vibrant and growing community effectively have QA teams numbering in the thousands. As a result, a great many

security professionals view OSS as being more secure than proprietary code and this impression is spreading.

To date, there has been nearly \$1B of venture capital investment in OSS companies. Most new startups have raised reasonable amounts with over 50 OSS companies funded in the past few years. Much of this activity has been in the USA and Europe so far. The VC focus has been on:

- Startups that can attack the large maintenance stream of incumbents
- Incumbents have taken notice of startups in their marketing
- Robust communities
- Standards based solutions.

One should expect this VC activity to continue as the variety of business models mature. As with any industry segment, as the OSS continues its maturing cycle, mergers and acquisitions will increase as seen recently by Red Hat buying JBoss and Oracle acquiring several OSS companies.

Conclusion

The question for CIOs and CTOs (users and suppliers) in 2006 is changing **from** "should we be using Open Source Software components and methodology" **to** "which ones should we use, as part of which architecture, over what kind of transition, using which selection, integration and support processes, and with which partners?" As a pioneer contributor, integrator and infrastructure solution provider, Bull is there for you as an architect of an open world. Enjoy the liberty you get with OSS!

More information:

- Bull contributions to Open Source
- Bull Open source middleware offering
- Bull Open Energy Open Source services offer
- Bull executive white paper on Open Source: the open source revolution.

SOLUTIONS

Bull NovaScale blade servers boosted by the new Dual-Core Intel® Xeon® 5100 processor

The new NovaScale B260 and the NovaScale B280 models:

- Reduce power and cooling costs by doubling their computing power and tripling their performance per watt
- Take advantage of powerful virtualization capabilities and administration facilities for server consolidation
- Provide pay-as-you-grow scalability with upgrade path from the NovaScale B260 to B280 model.

Bull unveils the new NovaScale® B260 and B280 blade servers based on the Dual-Core Intel® Xeon® 5100 - previously codenamed Woodcrest. These new servers benefit from lower thermal design power, using Intel® Demand-based switching (DBS) with Enhanced Speedstep® technology.

The NovaScale B260 model is mostly destined to be used as a server for ERP applications, Java and Service Oriented Architecture applications, while the features of the NovaScale B280 model in particular in terms of memory and storage solutions make it ideal for consolidation of multiple servers.

Outstanding performance per Watt

The NovaScale B260 and B280 are based on the Intel 5000P chipset with dual Front-Side Bus, Fully Buffered DIMM technology and new Dual-Core Xeon processor 5100 series. NovaScale B260 and B280 are expected to deliver up to 3 times the performance and over 3 times the performance/watt of the NovaScale

Blade 2021, providing one of the highest performances per Watt in the industry. They take full advantage of the new Intel® Xeon® core architecture and the low thermal design, making it ideal for high-performance, thermally-sensitive, space-constrained environments, helping enterprises' IT managers to reduce power consumption and cooling cost.

Simplified administration based on Open Source components

The NovaScale Blade Chassis Management Module, integrated into the Blade Chassis, streamlines and simplifies the management of all components in the chassis. It allows the configuration of multiple NovaScale Blade servers in one easy step through an easy-to-use web browser-based user interface integrated into the NovaScale Master Management Suite independent of the state of the blade servers or I/O modules. Furthermore, IT administrators can manage several blades inside one chassis at the same time, providing even more flexibility

and lower TCO.

Designed and developed by Bull, the NovaScale Master Management Suite is a software suite based on open source components. It provides an optional deployment tool, to provision and deploy instantly multiple blades automatically. Additionally, NovaScale Master provides standard-based interfaces for ease of integration into today's enterprise management consoles. It drives down system management cost and ease provisioning and optimization of blade utilization.

Prices and availability dates

The price of a NovaScale B260 configuration including 1GB memory, 1x Intel® Xeon® 5110 processor and one 36GB SFF SAS disk is 2.590 euros.

The price of a NovaScale B280 configuration including 8GB memory, 2x Intel® Xeon® 5140 processors and two 36GB SFF SAS disks is 7.720 euros.

Servers are available since September 2006.

SOLUTIONS (CONTINUED)

Bull takes the lead in launching the first totally flexible and modular Java EJB3 container in Open Source, using OSGi standards

During the application development phase, freeing developers from having to think about non-functional services is an important aim. One of the main methods to achieve this is the "container" approach. Application components are wrapped in containers, which also handle connections and calls to technical services. The Java EE containers (both Web and EJB) are a good example. Recently, the EJB container has been specified for version 3.0 of Java EE, and is taking the abstraction of technical services one stage further. The task of the developer is becoming even simpler as a result.

In response to the demand for simple and flexible Java containers, under the auspices of the ObjectWeb consortium, Bull has developed "EasyBeans" in Open Source, a light JavaBeans Enterprise container that is innovative, modular and supports the new EJB 3 specification (*for more information, see Florent Benoit's article in Bull Direct dated April 2006*). Using the new container makes it easier to develop business components used in distributed applications. Thanks to its modularity, the container can also be plugged into existing application servers such as JOnAS and Tomcat.

Nevertheless, the current trend is to go as far as possible towards middleware that is flexible, adaptable and easy to implement. To achieve this, the EasyBeans container has now been packaged in OSGi "bundles" that enables it to be run above this service framework. For an EJB container, this is a world first in Open Source.

The OSGi specification defines a Java platform that supports the implementation of delivery units, referred to as bundles, within the operational environment. This environment enables the components within bundles to inter-operate using a service-oriented approach. It provides

mechanisms to facilitate the continuous updating of applications, including the installation, activation, de-activation, updating and removal of bundles. It is, therefore, a highly dynamic environment. In addition, the OSGi framework handles the management of the necessary code dependencies (for example, the use of libraries) following installation of a new bundle for it to be activated. Once this occurs, it triggers the creation of the instance of the component deployed in the bundle.

This new version of EasyBeans for OSGi features new capacities and properties. EasyBeans has been made modular, so each component is packaged independently (in its own "JAR", Java Archive) and can be deployed as and when needed. This in turn saves system resources, because only the technical resources necessary to run current applications are brought into play, but the option of deploying others subsequently is retained. This feature is especially useful when using EJB on-board hardware, when only limited resources are available. Thanks to this design, EasyBeans is also becoming easier to operate with plug-in systems such as Eclipse (which also depends on OSGi), also providing EJB development

assistance tools in the process (since EJB can then be tested much more easily without exiting Eclipse).

Another advantage of this evolution is that EasyBeans can benefit from any ecosystem of tools and services already available on OSGi (systems administration console, implementation tools, any OSGi service already in existence, etc). The OSGi deployment facilities mean that the user no longer has to access the file system, as OSGi handles downloading, cache deposits and execution of bundles: a single URL is all that is needed!

All this is achieved without any significant increase in EJB development costs. When it comes to application software, all you need to do is to add a meta-data file (MANIFEST) to the "JAR" containing the beans (without the need for any alteration to the code or the XML description file).

For further information, read the article in InfoQ:

<http://www.infoq.com/news/easybeans-osgi-interview>

Further information about EasyBeans can be found at:

<http://www.bull.com/fr/middleware/easybeans.php>

WHAT'S NEW

Bull acquires critical Internet infrastructure outsourcing company Agarik

Bull further enhances its offerings and strengthens competitive position:

- in Web hosting
- in the critical Internet infrastructure outsourcing market
- for Web operators.

The Group consolidates its presence in the strategically important Telecoms sector.

End September, Bull announced that it has acquired Agarik, a French company specializing in critical Internet infrastructure outsourcing and managed on-line services. The move will strengthen Bull's position in the outsourcing market for IT platforms and critical data flows that require 24/7 continuous operation. Established in 1997, Agarik employs over 30 people and recorded revenues in excess of 5.2 million euros in 2005. The company is extremely well respected in its market for its technical expertise and the quality of the services it provides, with the highest level of commitment to service quality in terms of hardware and Web application services in the industry. Agarik has developed a first-rate commercial portfolio spanning major customers in the telecoms, media, services and retail/distribution sectors, including SFR, Canal Plus and Dassault Systèmes.

In parallel, Agarik holds an operator license and as a result was able to optimize its own infrastructure and

network – a Metropolitan Area Network (MAN) that links the main datacenters in the Paris region using "black" fiber-optic cables – and to develop particularly innovative tools to ensure that it can deliver against extremely tough service level commitments. Agarik's 24x7 critical solution, built around Vision proactive supervision software, will be deployed across Bull's principal European datacenters, including the recently added site in the city of Barnsley in Northern England, which comes under the 100 million euros outsourcing contract concluded between Bull and Barnsley Metropolitan Borough Council.

Finally, the strong relationships built on trust that Agarik has succeeded in developing with its customers have resulted in a customer satisfaction rating of over 94%. With the acquisition of Agarik, Bull's outsourcing offerings will be complemented by the capacity to manage critical Internet infrastructures 24/7, including extremely powerful Internet capabilities and sought-after expertise. In

addition, this will strengthen Bull's presence in the services market, particularly in the Telecoms sector, which is so strategically important for the Group's growth plans.

"This acquisition marks the start of a new phase in the development of Bull's outsourcing activities," confirmed Jérôme Belley, Director of the Outsourced Services business at Bull Services and Solutions. "It brings together the know-how and expertise within the Bull and Agarik teams, and will enable us to offer high added-value global solutions."

Agarik's workforce will join Bull Outsourced Services to form a business unit that will employ around 1,000 people in France.

"Bringing our two companies together highlights the extremely complementary nature of our expertise and gives Agarik new commercial impetus," added Laurent Seror, Operations Director at Agarik. "Being part of Bull will ensure that our business has the critical mass to respond to the needs of even very large-scale projects. We will also be able to call on Bull to support our growth in France and in countries with fast-growing telecoms industries such as Brazil and Poland."

WHAT'S NEW (CONTINUED)

Bull verifies the newly discovered largest known Mersenne prime number on NovaScale server

A team of Bull researchers at the company's labs in Grenoble, France, led by Tony Reix, has just verified the discovery of the largest known prime number in the space of just six days. This independent validation, completed by the Bull team, enables the results of months of scientific work to be officially recognized.

The new prime was independently verified using 16 Intel® Itanium® 2 1.5 GHz CPUs on a Bull NovaScale 6160 HPC system at the Bull Grenoble Research Center, running the Glucas program developed by Guillermo Ballester Valor of Granada, Spain. At 9,808,358 digits, the new prime ($2^{32.582.657}-1$) is close to the 10 million digit prime number which is the target for many researchers worldwide.

The new prime is the 44th discovery in a special class of rare prime numbers known as Mersenne primes. It was recently revealed in the Central Missouri State University (CMSU) Department of Communication lab, in the framework of the Great Internet Mersenne Prime Search (GIMPS) distributed computing project. The new prime was discovered in just nine months, using idle time on 700 lab PCs

For more information on Mersenne primes

Prime numbers have long fascinated professional and amateur mathematicians. An integer greater than one is called a prime number if its only divisors are one and itself. The first prime numbers are 2, 3, 5, 7, 11, etc. For example, the number 10 is not prime because it is divisible by 2 and 5. A Mersenne prime is a prime number of the form 2^p-1 . The first Mersenne primes are 3, 7, 31, and 127 corresponding to $P = 2, 3, 5,$ and 7 respectively. There are only 44 known Mersenne primes.

Mersenne primes have been central to number theory since they were first discussed by Euclid in 350 BC. The man whose name they now bear, the French monk Marin Mersenne (1588-1648), made a famous conjecture on which values of p would yield a prime. It took 300 years and several important discoveries in mathematics to settle his conjecture.

across the University campus.

"We are extremely proud that NovaScale servers are contributing to progress in the field of scientific research, by helping to meet some of the greatest mathematical

challenges," commented Jean-François Lavignon, Director of Bull's HPC business.

Source :

www.mersenne.org

Information technology serving local government dynamism: 10 golden rules to successful drive e-government projects

Far-reaching changes are taking place within local authorities as they undertake major programs to stimulate development in their areas. In practical terms this means getting closer to local citizens, putting administrative procedures on-line, working closely with a wide range of other public and private sector partners, creating new and innovative services, and adopting new ways of working and managing their activities. The challenges are numerous: facing them involves radically overhauling business processes and job roles, opening up information systems and breaking down the barriers between them, while providing appropriate change management.

So, information systems performance is one of the main factors when it comes to the attractiveness of a particular local area. Bolstered by this belief and its in-depth knowledge of local government's issues and constraints, Bull has developed a range of solutions and services dedicated to meeting the new challenges they face, including skills transfer, cost management and service quality monitoring.

Capitalizing on its experience of

numerous successful e-government projects worldwide, Bull today publishes its latest business white paper focusing on "Information technology serving local government dynamism", and further enhanced by exclusive interviews with:

- Luis Millán Vázquez de Miguel, Minister for Infrastructures and Technological Development, Extremadura Regional Government in Spain: "Open Source helps narrow the digital divide"
- Jacques Pélissard, Chairman of the

Association of French Mayors: "Acting locally is the best way to really match citizens' needs"

- Giancarlo Gabbianelli, Mayor of Viterbo in Italy: "Viterbo, e-democracy at the click of a mouse"
- Gérard Saracco, Head of the Information Systems, Telecoms and Networks Department, Strasbourg Urban Community in France: "ICT: creating value in public services".

An opportunity for Bull, architect of an open world, to highlight its value proposition for local authorities and public decision makers.

The white paper can be downloaded free of charge from: www.bull.com/public/localgov.html

EVENTS

Paris, October 12

Bull-IDG conference: IT serving local government dynamism

Local authorities are at the very heart of economic activity and at the center of the State's relationship with its citizens. Information and Communications Technology (ICT) provide a fantastic opportunity to further improve this key role in the society and strengthen their attractiveness in an increasingly globalized world.

Against this backdrop, what new services can they offer with the help of ICT? How

can they prove their dynamism through the use of e-government (for example, in terms of creating employment, improving the quality of their services...)? What technologies are available for them to use? What skills do they need (change management, security, outsourcing, regulatory compliance, breaking down departmental barriers)?

All these subjects will be covered at a

morning event organized by Bull, CIO and French IT magazine Le Monde Informatique on October 12, at the Pavillon Ledoyen in Paris.

André Santini, Member of the French Parliament and Mayor of the town of Issy-les-Moulineaux and Didier Lamouche, Bull Chairman and Chief Executive Officer, will be attending.

Toulouse, France, October 10-12

EuroPAM 2006

EuroPAM, ESI Group's 16th European Conference and Exhibition on Digital Simulation for Virtual Engineering will take place in Toulouse, France on October 10-12. Geared at experienced

users, the advanced conferences provide in-depth discussions of the theory and application of various ESI Group product capabilities.

Visit the Bull booth!

More information:

www.esi-group.com/EuroPAM2006/

Belgium, October 10-12

NATO InfoSec Symposium 2006

From October 10 to 12, the NATO InfoSec Symposium 2006 will take place at SHAPE premises in Belgium. This event is organized by NATO exclusively for its 26 member countries. Four hundred representatives from the NATO

Agencies and the Strategic Commands will attend the conferences and visit the stands.

Bull has been invited to participate in this Symposium as "Vendor" to present its TrustWay offering, which has already

gained recognition from the market and the accreditation bodies; it includes VPNs, cryptographic PCI cards and boxes, PPS USB cryptographic tokens.

Roma, October 10-12

ISSE

The 8th edition of the ISSE (Information Security Solutions Europe) Conference, the biggest European event in the IT security world, will explore the technical, organisational, legal and political issues in Identity Management and Access Control, Trusted Computing, Wireless and Mobile Security, Public Key

Infrastructure, etc.

Our experts will be pleased to welcome you on the Bull stand and will present their TrustWay secure solutions, including: VPN, PCI CryptoCard, CryptoBox, PPS USB cryptographic token.

Being involved in the European POSITIF (Policy-based Security Tools and

Framework) project which has been funded by the European Commission, Bull will also be present on their booth. The main goal of this project is to offer automatic tools to help security managers in protecting networked infrastructures and applications.

EVENTS (CONTINUED)

Issy-les-Moulineaux, France, October 18-20

World eGov Forum: "Which connected society do we want?"



FORUM MONDIAL DE LA DÉMOCRATIE
ET DE L'ADMINISTRATION ÉLECTRONIQUES
WORLD E-GOV FORUM

This worldwide event is the fruit of the merger of World e-democracy Forum launched by André Santini in 2000 and the European Electronic Administration Forum, which altogether gathered 4500 guests last year. The Forum will welcome over 40 countries from the five continents, including South Korea, the guest of honor of the Forum this year.

The Forum is supported by a number of international institutions including the European Commission, OECD, World Bank, from the United Nations: UNDP/United Nations Development Program, UNESCO/United Nations Educational, Scientific and Cultural Organization, UNITAR/United Nations Institute for Training & Research, also IUT and African Bank of Development.

It represents a unique opportunity to showcase both the role and the impact of Information and Communication Technologies (ICT) in the public sphere; to present public e-services and citizens'

opinions to all types of publics.

Three plenary sessions, four conference themes and around 20 simultaneous round table discussions are organized around the central question:

Which connected society do we want?

- E-inclusion: the real challenge to build the connected society that we want
- E-government as a strong issue of the governments transformation
- Re-invent democracy at the age of information: to a participatory democracy?

As sponsor of the World eGov Forum, Bull will have a number of speakers including:

- On October 18, from 10:45, **Didier Lamouche**, Bull's Chairman and CEO will be attending the opening plenary session; together with **Thomas Boni Yayi**, President of Benin, **Rho Jun-Hyong**, Minister of Information and Communication of South Korea, **Saburland Khan**, Global Alliance Director, **François Loos**, Delegated Minister of the Industry, **André Santini**, **Franz Morak**, Minister of the Information Society of Austria, **André Santini**, Member of the French Parliament and Mayor of Issy-les-

Moulineaux, **Chuck Tybur**, Intel Worldwide Director for Public Sector CSG, and **Dae-Woong Yang**, Mayor of Guro/Seoul.

- On October 18, from 16:30 to 17:45, **Jean-Pierre Barbéris**, General Manager, Bull Services & Solutions and French network will participate in the round table number 6: "How to build a new IT strategy using open source software?"
- On October 18, from 16:30 to 17:45, **Matthew Foxton**, Director of Bull Corporate Communication will lead the roundtable number 16: "Public-Private Partnerships and large outsourcing projects". **Alain de Lorgeril**, DGEFP/Parcours 3, **Claude France**, Atos, **Jean-Pierre Le Treut**, Bull Managed Services, **Bénédicte Roullier**, Documentation française, **Ken Rutt**, Barnsley Metropolitan Borough Council and **Antoine Tardivo**, MINEFI/MAPPP will be part of this roundtable.

For more information and to register :

Using Bull's privileged number (50% discount): WEG-BUL-B-675.
www.worldegovforum.com

France (Paris/CNIT, 18-19 October) and Portugal (Lisbon, 30-31 October)

Bull sponsors SAS Forum

SAS Forum France

SAS, the leading Business Intelligence software and services supplier, has chosen Bull as the technology sponsor for its User Group Conference in France, which takes place at CNIT, La Défense, Paris on 18-19 October. All the demonstrations and workshops that SAS is putting on over the two days will be run on a Bull NovaScale blade server. Some 1,500 people are expected to attend.

You are welcome to come and meet our SAS experts and consultants on the Bull booth, where you will be able to see for

yourself the performance gains that can be achieved by running SAS9 on a NovaScale server equipped with Intel® Itanium® 2 Montecito processors.

Xavier Fabre, SAS Consultant at Bull, will be presenting at **2:40pm on 19 October** on the subject of: "Outsourcing user management and hosting an SAS9 platform", based on a project with one of Bull's major customers.

Finally, if you take part in the competition organized by SAS you have the opportunity to win a 1GB Bull Trustway PPS high-security USB key (featuring a

cryptographic co-processor to ensure the security of all data held on the USB key and the workstation, as well as applications).

SAS Forum Portugal

Bull is also sponsoring the SAS Forum in Portugal (Lisbon, 30-31 October) where EDF will be presenting at one of the sessions on "How EDF transforms SAP data into gold with SAS", with the support of Bull's experts when it came to optimizing its infrastructure.

EVENTS (CONTINUED)

Paris, October 20

CUBE (Bull European User Group) UNIX day

Following two successful initial sessions, Bull and CUBE (the Bull European User Group) are organizing another day where users can share their experiences and learning points on October 20 in Paris. The event – which will be focused on Bull Escala[®] servers and the AIX[®]

environment under which they run – is not restricted to CUBE members: any French-speaking customers or prospects will be welcome to attend. The main themes of the day will be the global virtualization of IT architectures, illustrated by key customer case studies, including SOITEC.



For more information and to register for the event contact:
christophe.loye@bull.net

Tampa (USA), November 11-17

SC06

SC06, the premier international conference on high performance computing, networking and storage, will convene in November 2006 in Tampa, Florida. This year the conference will take its inspiration from Albert Einstein who said, *"Computers are incredibly fast, accurate, and stupid; humans are incredibly slow, inaccurate and brilliant; together they are powerful beyond imagination."*

On November 16, Jean-Louis Lahaie, Bull Project Manager for TERA-10 at CEA will give a conference on the implementation of the Number 1 Supercomputer in Europe within the framework of the session "Clusters And Blades", room 13, 3:30-4:00pm. This presentation will cover the various technologies at the heart of TERA-10, the overall architecture of the system, as well as the issues that had to be addressed by the implementation team.



Visit the Bull booth (#1651)!

More information:

<http://sc06.supercomputing.org/>

Paris Expo/Porte de Versailles/Hall 5, November 7-8

VoIP Convention

According to the studies carried out by the leading industry analysts such as IDC, Gartner and Forrester, Voice-over-IP (VoIP) and its related convergence applications using the IP protocol represent a rapidly developing market. Such technologies bring together voice, video and data communications in the same infrastructure and incorporate media applications that enhance the way businesses interact with their customers. Destined to respond to the real need for

more information on this subject, the VoIP Convention is set to be an essential event for the networks and telecoms industry. More extensive than a simple exhibition and yet also more concrete than a conference, the VoIP Convention provides a unique platform to explore all aspects of the emerging IP market. It addresses large and small businesses, as well as public services – helping functional, operation and financial managers, to make their strategic choices.

As a major integrator of telecoms solutions for operators and other businesses alike, Bull will be playing an active role in the event alongside our partner Thomson Cirpack, a major supplier of platforms for IP networks. Our experts will be delighted to welcome you on our stand C8 and to tell you more about our infrastructure solutions and IP Centrex services.

Paris, November 22-23, 2006

InfoSecurity Paris

As each year, Bull will be present at InfoSecurity Paris, the main security event in France that will take place at CNIT Paris la Défense, from November 22 to 23. Themes of conferences include: E-SSO, intrusion, phishing,

encryption, audit, etc. On its booth (number G14-H13), Bull will demonstrate the software solutions of its Evidian subsidiary (WiseGuard, identity, access and Single Sign-On management, quality of service management, etc.), its

TrustWay encryption solutions (cryptographic USB key/Personal Protection System, VPN appliances, encryption cards, etc.), and present its complete range of IT security services.