

NEXT GENERATION Data Center

Virtualization
Services Management
Architecture
Optimization
Security
Energy
Cloud Computing
Storage

Infrastructure services

Inventing the new generation of IT infrastructures

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[**READY TO MEET TODAY'S BUSINESS CHALLENGES** NEW-GENERATION
IT INFRASTRUCTURES LET YOU CONSTANTLY EVOLVE AS YOUR NEEDS CHANGE]

VIEWPOINT

IT Infrastructure as a driver for innovation

Today's IT Departments need to provide systems that are sufficiently agile, available and reliable to satisfy the development and innovation demands of the public and private sector organizations they serve. The best way to achieve this is through a whole new kind of IT infrastructure: which is fully optimized to guarantee the very high levels of service needed to keep pace with evolving business ecosystems or the rapid launch of new products. Bull is helping customers implement these new-generation, resolutely service-oriented infrastructures.

A shifting focus: from operations to service deliveries

When the pressure is on to launch new applications fast, without the slightest dip in operating efficiency... and when decision-makers constantly demand that information is available to them, without fail... IT infrastructure is critical. But this means IT Departments have to effectively combine cost control, day-to-day operating constraints and ever-increasing technological complexity. So they need infrastructures that can easily take on board and support every change that comes their way, with no effect on their performance. Thanks to technologies such as virtualization and the implementation of business-oriented service strategies, today's IT Departments can now build the flexible, powerful and reliable environments they need, paving the way for Cloud computing.

A new dialogue between business and IT Departments

This service-oriented approach is the result of a structured dialogue between the IT Departments and the business, based on an understanding of internal customers' concerns and an assessment of the impact changes may have on the information system. Once deployed, it enables the IT team to commit themselves to delivering the

appropriate service levels, which in turn leads to more accurate financial management and better ROI (return on investment) because of the greater financial transparency within each activity or department, as well as helping to improve the identification, assessment and control of IT-related risks.

Bull: expertise and commitment

Bull brings together the necessary experts in consultancy, integration and support to help IT Departments successfully create tomorrow's service-oriented IT infrastructures. Bull is equally capable of getting involved in global approaches – helping to establish productive relationships between the IT teams and the business, based on the use of reference architectures and service catalogues – and in more focused optimization projects, where the company offers audit services and recommends key target actions. Bull's real strength is its responsiveness: providing rapid evaluations, committing to results, and managing performance within tight timescales... taking a truly multi-technology and multi-vendor approach as a systems integrator.

« Bull operates just as efficiently as part of a global initiative or on more tightly focused optimization projects. »

CONSULTING

Aligning resources with business needs

Consultants at Bull Advisory Services work alongside IT Departments to define the optimum approach for implementing a business-oriented infrastructure. They use tried and tested tools to help identify the best way forward, and supporting the organization throughout the fundamental process of building a good relationship between the IT Department and its own internal customers.

IT infrastructure audit and analysis

Bull Advisory Services carries out targeted audits on the whole IT infrastructure lifecycle:

- Based on ITIL's ITSM model, a 'maturity analysis' determines how far the current IT infrastructure could meet the levels of service required by the various business activities.
- Through its partnership with GlassHouse Technologies, Bull is ideally placed to provide innovative infrastructure auditing services: GPS (Global Project Survey), for rapid assessment of the Data Center resource utilization levels, and identification of the sources of immediate quick wins'; COMPASS services, for a more in-depth analysis to define solutions for improving, optimizing or transforming existing architectures; and finally, VISION services that provide the IT Department with an accurate picture of the key infrastructure components for more detailed control of risk, costs and service levels.
- Carried out in partnership with APC/Schneider Electric, the energy audit enables the Data Center to be brought up to new energy efficiency standards, helping to establish optimization scenarios and define eco-efficient and sustainable IT practices.

Services matrix and catalogue

By structuring the dialogue between the IT Department and the business, this crucial phase lays the foundations for a business-oriented IT infrastructure. This involves defining the 'Service Management Matrix' and the catalogue of services to be implemented, to guarantee that the IT infrastructure is aligned with the challenges faced by the business. This approach enables the infrastructure to be rationalized and allocates resources according to how critical each application is as part of the whole picture.

A reference architecture

Depending on the criteria set out in the services catalogue, a benchmark technical and functional architecture (the 'Reference Technical Architecture') is defined, which takes into account all the necessary resources (technologies, tools, processes, organization...). This phase is supported by a budgetary analysis of the transformation, so that return on investment (ROI) can be calculated.



[BULL PROVIDES EXPERTISE ACROSS THE ENTIRE IT INFRASTRUCTURE
VALUE CHAIN FOR FULLY OPTIMIZED SOLUTIONS]

INTEGRATION

Global expertise

Whether it's a question of designing and implementing new systems, or optimizing an existing one, Bull's integration experts draw on a whole spectrum of technologies, tools and methods to provide an optimum response to each customer's particular issues. Thanks to this focus on the needs of the business, the infrastructure can be rationalized, secured and made more flexible. Bull successfully delivers transformation and systems integration projects, with a constant concern to ensure the overall coherence of the information system, service continuity and excellent performance.

Capitalizing fully on available resources

Capable of getting involved at every point in the IT infrastructure chain – whether to provide on-off optimization initiatives or global solutions – Bull's architects use pragmatic methodologies to achieve rapid results:

- Server consolidation and virtualization: Bull carries out virtualization projects on every type of environment, whatever the scope and no matter how critical it may be, and successfully completes migrations.
- Data storage and lifecycle management: Bull brings together all the components needed to provide rationalized and highly secure solutions (back-up strategies, business recovery plans, high availability...).
- Network convergence: Bull constructs end-to-end network infrastructures, including mobile networks, and helps its customers manage and secure these environments with appropriate processes and surveillance tools.
- Moving towards multi-vendor environments: with its expertise in heterogeneous multi-vendor environments, Bull helps its customers take advantage of open technologies and runs migration projects

towards Microsoft, Linux or Open Source environments. Bull is especially adept at managing ERP infrastructure evolution projects, with a high level of expertise in SAP, messaging system migrations and directory integration projects, and Business Intelligence infrastructure projects using its Bull Fast Track integrated solution, based on Microsoft SQL Server® 2008...

Service Level Management (SLM)

Bull offers a wide range of services to guarantee the long-term operational effectiveness, performance and service continuity of infrastructures. Bull puts in place the whole structure, from business recovery infrastructures, service contracts, procedures, documentation, crisis management cells and pro-active monitoring, to an integrated systems administration platform which provides a professional and structured approach to managing a multi-vendor information system. Bull also provides numerous systems administration optimization services, implementing a customized platform of performance analysis tools.

[TO ENSURE A LONG-TERM RESPONSE TO BUSINESS CHALLENGES, BULL
KEEPS A CONSTANT, WATCHFUL EYE IT INFRASTRUCTURES]

MAINTENANCE AND SUPPORT

Sustainable performance...

These days it is unacceptable for an application or item of data to be unavailable, even momentarily. And although it is vital to respond rapidly in the event of an incident, it is even better to manage risk proactively and anticipate potential failures or breakdown. This is the approach taken by Bull's support and maintenance teams, allowing the infrastructure to synchronize with the rhythm of the enterprise... unflinchingly.

Measuring service levels

VISION services provide total visibility of key infrastructure components (storage capacity, back-up and restore operations, virtualized servers...) which enables resources to be managed very precisely. Regular and reliable monitoring enables the IT Department to assess the impact of events or modifications, the potential risk of deterioration in service levels, and future requirements. Presented as a series of summary dashboards, the reports generated can be analyzed by Bull experts, and corrective action recommended as necessary. These services are managed by the Bull Technical Account Manager (TAM); the single point of contact for the customer.

Industrial standard high availability (HA)

Bull's HA center specializes in complex and critical systems, and delivers the highest level of technical support. HA 999 contracts guarantee 99.9% or 99.99% uptime annually. Bull offers Europe-wide, 24x7 remote surveillance for IT systems. Customers have direct contact with our experts at the center, and enjoy a privileged relationship with their TAM, who provides day-to-day advice and support.

Controlling service continuity

Service continuity is a critical issue, as is the need to test the resources already installed at regular intervals. With this in mind, Bull ensures technical systems are regularly checked, along with procedures and crisis cells.

Multi-vendor and multi-ISV support

Bull's Global Care offerings provide full servicing and maintenance support for all hardware manufacturers and software publishers, from occasional interventions through to full service continuity solutions with comprehensive 24x7 remote surveillance and call-out services.

[COMBINING VISION, TECHNOLOGIES AND KNOW-HOW, **BULL HAS ESTABLISHED ITSELF AS AN ARCHITECT OF NEW-GENERATION IT INFRASTRUCTURES**]

ORGANIZATION

A professional approach to infrastructure services

Bull is focused on meeting the needs of public and private sector customers alike for innovative, efficient and service-oriented infrastructures. Its response is structured around its networks of architects and experts located in almost 60 different countries to create a unique body of expertise, delivering highly professional resources and methods. Thanks to its centers of expertise and an on-going certification and training program, Bull can offer its customers the full benefits of the very latest technologies and best practices.

A truly customer-focused organization

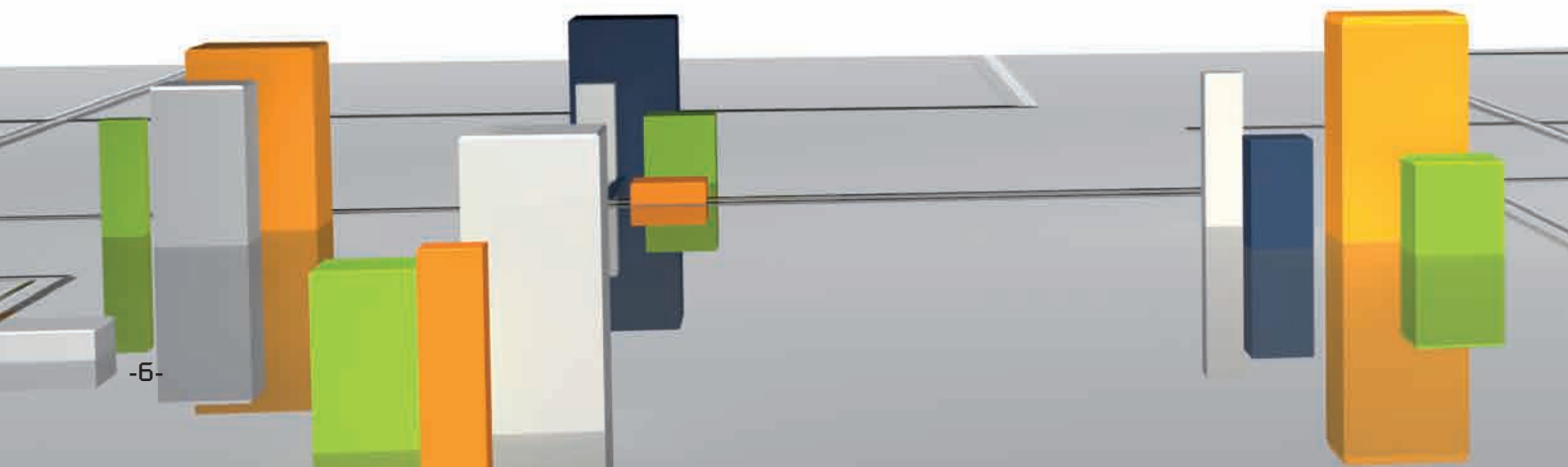
The quality of the relationship between the customer and their service-provider is one of the keys to the success of projects. This is why, throughout every one of its assignments, Bull's focus is on close local proximity, visibility and making proactive recommendations; for more dynamic exchanges. This is made possible by the support of a dedicated organization and a customized relationship with each customer. A single point of contact, the Bull Technical Account Manager (TAM), ensures that the customer's needs are properly expressed and that the information relating to the project – whether it is technical or strategic – is fully visible. Supporting the TAM, Bull's architects, engineers and experts lead assignments or projects while ensuring that everyone has the same understanding of objectives and results. They

draw on the best practices of the industry to design the best scenarios, sharing the same vision and speaking the same language. This forms the basis of a really long-lasting and efficient relationship.

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A network of technology centers

Bull has access to all the Group's centers of expertise, and therefore to all the resources related to different environments: servers, storage, archiving, security, service continuity, consolidation and virtualization... This means its teams understand the entire infrastructure – in a holistic way – with all its components, and can put forward multi-vendor approaches with direct access to level 3 support, ensuring that every customer benefits from the Group's whole range of strengths.



Bull has invested significantly, either on its own or with its strategic partners, in setting up international centers devoted to developing major new-generation infrastructure technologies:

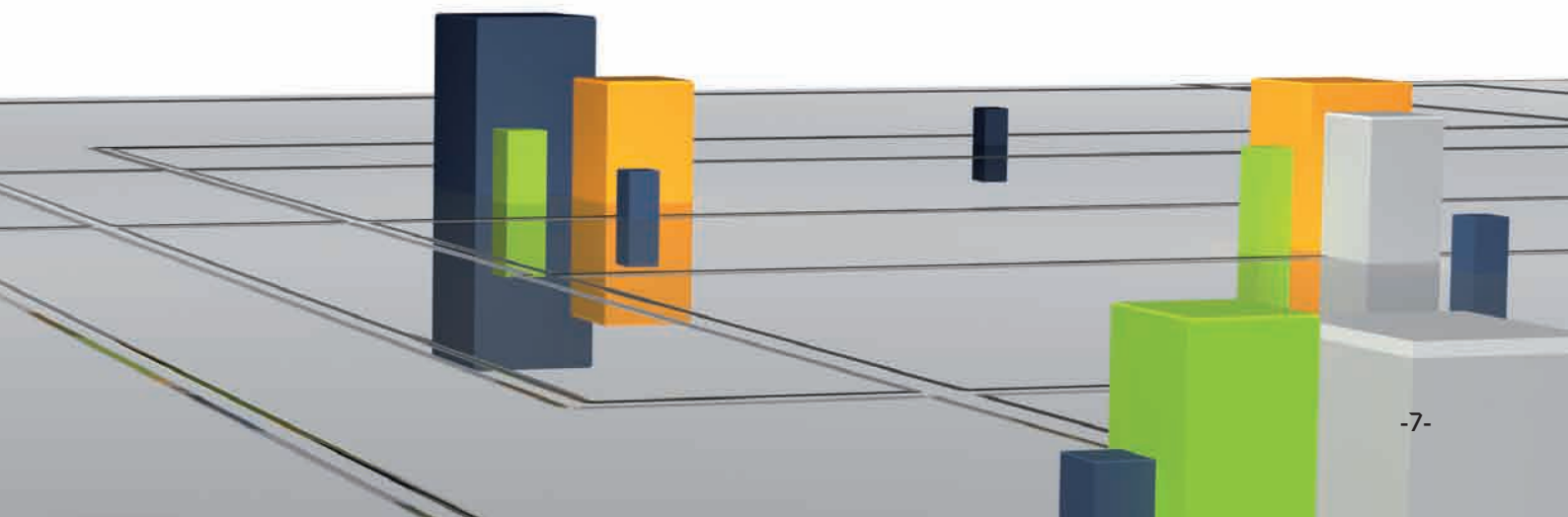
- The **HA Center**: established close to Bull's R&D center and providing direct access to relevant expertise when necessary, this center is responsible for the operation of high-availability services throughout Europe, via secure remote access points.
- The **Bio Demo Center**: located next to Bull's Grenoble technology center, this facility showcases the very latest developments in technology associated with Bull's Novascale and Escala platforms, so Bull's customers and partners can 'touch and feel' these for themselves under real-life conditions. The center runs a guided tour to explore three major issues: energy efficiency, topology optimization and operating procedures.
- The **Storage Solution Center**: the international center set up in conjunction with EMC, is dedicated to data protection and virtualization technologies. It aims to offer solutions to today's main data administration challenges.

Skill clusters and a network of partners

As a multi-vendor systems integrator, Bull selects the best technologies on the market and forms active partnerships with leading players in their field. Bull works together with its network of partners to create international technology clusters such as the Storage Solution Center, and is involved in certification programs to prove its high level of expertise. Bull is officially recognized, among others, as a:

- EMC Velocity Partner and Authorized Services Network
- NetApp Authorized Professional Partner
- VMware Solution Partner and OEM Technology Alliance member.

Bull's consultants and architecture specialists are all accredited in the following mainstream technologies: IBM AIX (OEM Certified), Microsoft (Gold Certified), NetApp (APSP), EMC (ASP, ASN), VMware (VSP, VTSP, VCP), Citrix (System Integrator), RedHat (PS Certified), Brocade (Certified Partner), Overland (Certified Partner), Cisco (Silver Partner), SUN (Agreed Partner), DDN (PS partner), CommVault (PS partner)...



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*Bull – rue Jean Jaurès - 78340 Les Clayes-sous-Bois – France
UK: Bull Maxted Road, Hemel Hempstead, Hertfordshire HP2 7DZ
USA: Bull 300 Concord Road, Billerica, MA 01821*

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