

SAP NetWeaver Business Intelligence/SAP Strategic Enterprise Management AT A GLANCE

Customer Profile



Gas Natural

Sector:

Energy service sector

"The SAP infrastructure changeover has completely fulfilled our expectations. We can benefit from the SAP-validated and certified infrastructure architecture model with Oracle RAC and Linux in a variety of respects for SAP NetWeaver BI-/SAP-SEM use."

– José Luis Checa, Systems & Architecture Manager, Gas Natural

Gas Natural has utilized a system platform changeover to optimize SAP NetWeaver BI-/SAP SEM use and create advantages in terms of efficiency

With approximately 10 million customers, the Gas Natural Group based in Barcelona represents a key international player in the energy sector. The Gas Natural Group, operating in a total of 10 countries with just under 6,700 employees, achieved annual net profit 633.9 million euros in the financial year 2004. Since deregulation of the energy market in 1998, the multinational company has been pursuing an ambitious expansion and diversification strategy. In addition to the production, supply and transport of natural gas, the energy group now generates electricity with its own power stations and wind turbine generators, which it provides to end consumers and companies. To increase competitiveness and realize growth-oriented company objectives, Gas Natural has intensively utilized solutions provided by the mySAP Business Suite family since 2000. "SAP solutions are an important cornerstone for us on the path towards further profitable growth," states José Luis Checa, Systems & Architecture Manager at Gas Natural.

Several objectives on the to-do list

In the autumn of 2004, Gas Natural introduced an extensive realignment for the system platform/architecture utilized, with the specific aim of optimizing use of the combined application solutions SAP NetWeaver BI-/SAP-SEM. As IT Manager José Luis Checa explains, "To begin with, there was a real need for action to get the system performance and response times up to a better level. At the same time, we also endeavored to improve the cost efficiency for SAP NW BI-/SAP SEM operation. And on top of that, we also wanted to be able to respond to a more intensive future use of the SAP solution in a more flexible and straightforward way."

A significant trigger for optimizing the system performance was the batch and online operation occurring at the same time, in which extremely large data volumes had to be processed in a very short time. This mixed operation was called for in particular because of increased processing requirements with the SAP SEM consolidation of budget/finance data in Latin America. The total worldwide SAP environment of Gas Natural with over 5000 users is served centrally from Barcelona, 7 days a week X 24 hours a day from 2 major computing centers.

Added value through a combination of the tried-and-tested with the new.

A taskforce consisting of members of the Gas Natural IT section examined solution alternatives for achieving the objectives set out and evaluated these in detail. The following innovations were adopted, which were to be implemented as part of a project:

- Implementation of a horizontal architecture model for extending the database level based on Oracle Real Application Clusters 9i with simultaneous improvements on the application level, without changing these technically.
- Validation and certification of the infrastructure architecture by SAP.
- Introduction of the uniform operating system platform Linux Red Hat with new Intel-based hardware on the application and database level for SAP NW BI-/SAP SEM use; but without fundamentally modifying the SAP solutions.
- Migration of the existing SAP NW BI-/SAP SEM database to the new RAC database cluster Linux platform.
- Extensive tests, so as to be able to check functional correctness and carry out performance measurements for the old and new environment.

According to IT expert Mr. Checa “we opted for RAC as we had positive experience with the Corporate Data Warehouse used since 2000 and which currently has a volume of 2.2 TB. At the same time, we were also striving towards improving system performance. The decision for Linux was justified on the basis that a more cost-effective platform was associated with the SAP NetWeaver BI-/SAP SEM in comparison to the Unix system used up until now – in particular through the use of standard Intel/AMD servers.”

Short project realization time – great results from the partners involved

The optimization project was realized in a time frame of just 3 months – including validation and certification of the infrastructure model. The new SAP NW BI-/SAP SEM system platform has been running since January 2005. The system utilizes a 2-node Red-Hat cluster with two Intel-based HP servers on the application level. The database level consists of a 7-node cluster with Linux Red Hat 3.0 and Oracle RAC 9.2.0.5 as well as the Oracle Cluster File System 1.0.13 on 7 Intel-based HP servers. Formerly, Windows (Intel server) was used on the application level and Unix (Unix high-performance computers without RAC) on the database level. In addition to the SAP validation/certification and the extension of the new SAP system platform, the project work focused on database migration (size of the database: around 290 GB) towards RAC as well as extensive tests with special test tools. As Gas Natural IT Manager Mr. Checa recalls, “Everyone involved pulled together wonderfully for the work. That meant great results. The effective teamwork between SAP, Oracle, HP and Red Hat was a crucial factor for the success of the project.”

"The use of database clusters has meant that SAP NW BI-/SAP SEM response times have improved by an average of 144.5 percent."

Impressive productivity and efficiency boosts

Mr. Checa sums up what has been achieved as follows: "The SAP infrastructure changeover has completely fulfilled our expectations. We can benefit from the SAP-validated and certified infrastructure architecture model based on Oracle RAC and Linux in a variety of respects for SAP NetWeaver BI-/SAP-SEM use."

Measurements carried out by Gas Natural have thus revealed that "the SAP NW BI-/SAP SEM response time have improved by an average of 144.5 percent thanks to the use of database clusters. The level of satisfaction among users has increased considerably". Furthermore, the energy group can now realize potential platform extensions, which may be necessary because of increasing SAP NW BI-/SAP SEM user numbers. "All we do then is bring further RAC nodes or servers into operation", states Mr. Checa.

In the Corporate Data Warehouse strategy of Gas Natural, SAP NW BI-/SAP SEM (currently over 700 named users) represents a hugely significant element, which is becoming increasingly more important for the entire company operation. In addition, the SAP database availability has improved further because of the new system platform. If one (or more) RAC nodes fail for some reason, the others immediately assume their task(s). The three database administrators responsible for the databases at Gas Natural are also responsible for the RAC implementation.

Cost reduction through Linux

When it comes to the Linux platform, Gas Natural is equally satisfied with the results achieved. More precisely: "Linux allows us to significantly reduce the SAP operating costs. Instead of special Unix servers, we can now utilize more cost-effective standard Intel/AMD servers. In comparison to Unix, the cost ratio is at least 1:10," stresses IT expert José Luis Checa.

Gas Natural also wants to extend RAC/Linux to the SAP IS/U application in future, in addition to the SAP NetWeaver Business Intelligence/SAP Strategic Enterprise Management. The objectives here: to reduce the time frame with batch runs for accounts settlement; but at the same time have recourse to cost-effective standard servers, or improve system scalability against the backdrop of continually increasing numbers of customers. The planning for this is already underway in the multinational and expansion-oriented energy group.

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Summary

Gas Natural has optimized SAP NetWeaver BI-SAP SEM use on the basis of Oracle Real Application Clusters (RAC) and Linux. Thus, the multinational energy group has boosted system performance, increased IT cost efficiency and can also respond to further SAP NW BI-SAP SEM use very flexibly in terms of its IT capabilities.

Sector

Energy service sector

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The most important challenges:

- Improvement in the SAP NetWeaver BI-SAP SEM system operation resulting from a change to the user application, in particular via an overlapping of batch and online processing
- Cost reduction in the SAP infrastructure.

Project aims:

- Introduction of new infrastructure technology components for optimized SAP NetWeaver (NW) BI-/SAP SEM use, with significant system or performance improvements.
- Strategic realignment of the SAP infrastructure for a more cost-efficient and future-flexible IT expansion, based on a SAP-certified infrastructure architecture model and standard IT Components, without far-reaching changes on the application level.

Decision for Oracle RAC and Linux:

- Experience already gained with the Oracle Real Applications Cluster (RAC) solution.
- Realization of cost savings via a platform migration towards open source/Linux.

Highlights of the implementation:

- Formulation of feasibility studies with concrete project stages.
- SAP certification for the new infrastructure architecture.
- Extension of the new SAP-RAC-Linux environment together with new Intel server hardware and changes on the database and application level.
- Close coordination between SAP, Oracle, HP and Red Hat.
- Extensive tests for the new SAP-RAC-Linux platform.

Main benefits for the customer:

- Above-average improvement in response times; the level of satisfaction among SAP NW BI-/SAP SEM users has increased demonstrably.
- Future security through SAP validation and certification of the new architecture model.
- Simplified scalability for SAP solutions based on databases; more flexible SAP NW BI-/SAP SEM extension.
- Cost savings with the SAP infrastructure platform.
- Basis for the use of cost-effective Intel/AMD-based "standard servers".
- No general changes required for the SAP software.
- Further increase in the SAP high availability.

Existing System landscape:

- SAP R/3 Enterprise (4.7) and SAP IS-U (4.64)
- SAP NetWeaver Business Intelligence 3.1 and SAP Strategic Enterprise Management 3.2

Database

- Oracle Real Application Clusters (RAC) 9.2.0.5 with
- Oracle Cluster File System (OCFS) 1.0.13

Hardware

- Hewlett-Packard HP

Operating system

- Linux Red Hat AS 3.0

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