Biological E. Ltd.

As Biological E. Ltd. looked to unify its pharmaceuticals business on SAP ERP applications, it wished to ensure top levels of performance and availability for the new solutions without breaking the bank. By selecting SUSE® Linux Enterprise Server for SAP Applications as its strategic operating system platform for the new ERP landscape, the company has gained a rock-solid platform for core business systems, achieving 99.9 percent availability and saving 50 percent on overall IT costs.

Overview
Biological E. Ltd. is a privately held biopharmaceutical company based in Hyderabad, India, specialising in low-cost vaccine production. Established in 1953, Biological E. was one of the first private sector companies in India to manufacture biological products. Today, the company has grown to become a major supplier of vaccines and other pharmaceuticals to international development and aid organisations, including WHO, UNICEF and BMGF. It also works within India to supply central and state government hospitals, public sector companies, the armed forces and retail customers.

Challenge
Biological E. is committed to providing customers with access to high-quality medicines at affordable prices. As a low-cost pharmaceutical provider, the company faces the challenging task of balancing strict quality standards with competitive operating costs—ensuring that its products are consistently produced and controlled, all while maintaining healthy profit margins.

To ensure that business runs as profitably and productively as possible, Biological E. needs strong visibility and control of every link in its operational chain. To achieve this, the company recently introduced an integrated suite of SAP ERP applications, used to manage business processes from sales and finance to materials and inventory management.

With end-to-end operations underpinned by SAP applications, Biological E. knew that guaranteeing high performance and round-the-clock availability for the new solutions would be key to continued business success.

Mr. Srinivasan, Senior Project Consultant at Biological E. Ltd., said, “SAP ERP applications are absolutely critical to driving our day-to-day operations and must be kept up and running at all times. Even minor delays or downtime would have a major impact on the business: it would be extremely difficult to manage orders, orchestrate manufacturing processes and distribute products.

“With SUSE and SAP solutions supporting the business, we are confident that we can take best advantage of the growth opportunities that the market holds and guide Biological E. to even greater heights of success.”

Mr. Srinivasan
Senior Project Consultant
Biological E. Ltd.
“Working with sensitive pharmaceutical products only adds to the pressure. We often have to meet tight delivery deadlines, and failing to do so would prevent doctors and pharmacists from supplying patients with essential medicines—not to mention put us at risk of regulatory penalties and reputational damage.”

To keep its operations running smoothly at all times, Biological E. looked for a way to protect critical SAP workloads against the risk of downtime and to increase overall service availability—all while keeping a tight rein on operating costs.

Solution
To help design and deploy a rock-solid IT infrastructure for supporting its SAP ERP application suite, Biological E. turned to its partner SAT InfoTech. The latter recommended implementing SUSE Linux Enterprise Server for SAP Applications on commodity x86 servers to deliver the perfect balance of top performance and reliability at a low cost of operation.

Mr. Srinivasan said: “We looked into several operating system and server configurations, and while many promised to deliver the features we were looking for, they came at too high a cost. In contrast, SUSE Linux Enterprise Server for SAP Applications is the ideal operating system for delivering continuous access to critical SAP applications and data. Taking advantage of the SUSE Linux Enterprise High Availability Extension—an integrated set of open source clustering technology—Biological E. has established a highly-available, two-node cluster for SAP production systems.

In this configuration, Biological E. runs its entire SAP production system, including the database and all cluster-controlled instances, on a single cluster node. A backup of the main production system runs on a second cluster node. To provide for comprehensive replication and to support full redundancy, the company uses an active/active high-availability configuration.

In the event of an outage, Biological E. may automatically resynchronise the temporarily unavailable node to the latest version of data without any interruption to production. This helps increase SAP application availability, enabling vital production systems to stay online during planned or unplanned downtime.

“SUSE Linux Enterprise High Availability Extension helps us to ensure that our SAP landscape remains highly available at all times,” said Mr. Srinivasan. “Our failover time is less than a minute, meaning that we can get key systems back up and running with minimal impact on operations, ensuring that business continues as usual, no matter what.”

The high-availability configuration includes OCFS2 (Oracle Cluster File System 2)—an open source, symmetric and parallel cluster file system. With OCFS2, each application’s files are available to all nodes in the cluster, and file access is coordinated through DLM. Nodes may concurrently read and write directly to storage via the standard file system interface, enabling easy management of applications that run across the cluster. Biological E. can easily create an image of the shared application files, helping to provide effective disaster recovery in the event of a node failure.
To support SAP development and quality assurance instances, Biological E. has provisioned distinct virtual environments for each instance on a single physical server, using Xen virtualisation technology. Server virtualisation enables the company to preserve its existing system architecture while using a more efficient physical infrastructure.

Mr. Srinivasan said: “With virtualisation, we can easily scale up computing resources to test new SAP functionality or configure new versions on an as-needed basis and scale down again once this work is complete. This flexibility allows us to meet the changing demands of the business while keeping operational costs to a minimum.”

**Results**

Today, with SUSE Linux Enterprise Server for SAP Applications delivering outstanding uptime and performance for the company’s SAP environment, Biological E. benefits from a unified view of enterprise-wide information and centralised control over operations.

Mr. Srinivasan said: “SUSE Linux Enterprise Server for SAP Applications ensures that our users can quickly and consistently access the information they need to make well-informed decisions. Teams gain fast insight into all areas of the business and can coordinate operations effectively. All of this helps Biological E. boost business performance and profitability.”

**TIGHT CONTROL OVER COSTS**

With SUSE Linux Enterprise Server for SAP Applications, Biological E. has gained the stable and reliable platform that it needs to deliver optimum availability for SAP applications while reducing IT expenditure, thanks to lower investment, maintenance and licensing costs.

Mr. Srinivasan said: “SUSE Linux Enterprise Server for SAP Applications provides excellent availability, reliability and stability at a highly competitive price. Simplified licensing means that we require only one subscription per physical machine, helping keep software licensing and support costs low.

“With Xen virtualisation on SUSE Linux, we can easily scale up our systems to meet increased demand without the need to invest in additional physical servers. This allows us to grow in a very cost-effective way. In all, we estimate that we have saved around 50 percent on IT costs thanks to SUSE Linux Enterprise Server for SAP Applications.”

**RUNNING A BETTER BUSINESS**

Configured with the SUSE Linux Enterprise Server High Availability Extension, the SUSE Linux Enterprise landscape at Biological E. delivers the round-the-clock availability that the company needs to stay on track for success in the fast-paced pharmaceuticals market.

Mr. Srinivasan concluded: “We are very impressed with the availability and reliability offered by the SUSE solution. We have been able to achieve uptime of up to 99.999 percent with SUSE Linux Enterprise Server for SAP Applications, helping us sustain close to 24/7 operations.

“With SUSE and SAP solutions supporting the business, we are confident that we can take best advantage of the growth opportunities that the market holds and guide Biological E. to even greater heights of success.”
“We estimate that we have saved around 50 percent on IT costs thanks to SUSE Linux Enterprise Server for SAP Applications.”

MR. SRINIVASAN
Senior Project Consultant
Biological E. Ltd.

Contact your local SUSE Solutions Provider, or call SUSE at:

1 800 796 3700 U.S./Canada
1 801 861 4500 Worldwide

SUSE
Maxfeldstrasse 5
90409 Nuremberg
Germany