Data Accessibility Allows Quicker Drug Development

Customer Case Study

Pfizer cuts project development time by 50% with Cisco Data Virtualization Suite.

EXECUTIVE SUMMARY

Customer Name: Pfizer
Industry: Pharmaceuticals
Location: New York, NY
Number of Employees: 91,500

Challenge:

- Remove data integration bottlenecks to effectively provide information to researchers and managers during the drug discovery process
- Maintain quality and security of replicated data
- Shorten drug discovery cycle

Solution:

- Established a more effective method for prototyping complex analytics solutions by creating a portal environment using the Cisco Information Server to allow quicker access to data from multiple disparate sources

Results:

- Reduced time required to develop projects by 50%, from 3-4 months to 6-8 weeks
- Improved data quality by 5%, using data services to achieve SOA compliance
- Achieved a 10% reduction in operational infrastructure costs
- Experienced a 60% drop in risk of drug discovery projects missing launch dates

Challenge

The industry average to bring a new drug to market is 15 years. Each year of discovery and development entails billions of dollars in research and testing. Pharmaceutical companies like Pfizer must make informed decisions about which prospective drugs show the most promise, and focus their resources accordingly, to be competitive.

In Pfizer's Informatics Division, research scientists and drug portfolio managers must access and analyze a complex set of data from multiple, disparate sources. This information comes from scientific databases that contain diagrams of compound molecular structures, test results from prior research, and details on a compound's lineage through various stages of development, as well as business-side information such as the number of researchers involved in a project (HR databases), the cost of personnel and other resources (finance systems), and the number of "stage gates" each project has passed through (project management databases).

Data integration represented the biggest bottleneck to effectively provide information to researchers and managers during the drug discovery process.

Pfizer has traditionally used three approaches: custom coding between sources and consuming applications; replication of file extracts; and Extract, Transform and Load (ETL) to create data marts and warehouses. Yet, proliferating data silos and increasing complexity had minimized the effectiveness of hand coding. Data replication had only increased the burden on IT of maintaining the quality and security of the replicated data in addition to the original source data. While ETL

"Cisco is helping our group literally shave years off the drug R&D process."

Dan Eng
Project Manager
Pfizer Global Research and Development, Informatics Division

effectively integrated data for large-scale, multi-dimensional analysis, its development typically required weeks or months to complete, with the resulting data often out-of-date. Between the administrative complexity and difficulty in getting at the underlying sources, Pfizer averaged three to four months to complete its design, development, test, and deployment phases.

Further, none of these traditional approaches fit easily into Pfizer's new service-oriented architecture (SOA) strategy that emphasizes creating data objects for reuse.

Solution

The Cisco Information Server was implemented, allowing Pfizer's overall data integration capabilities to expand to data virtualization, data abstraction and data federation across both SOA and non-SOA environments. The scientist workbench can now support both build and run-time requirements.

With the establishment of an easy-to-use development environment, data can be abstracted in the form of relational views for reporting as well as Web services for SOA initiatives. The high-performance query engine securely accesses, federates and delivers the diverse, distributed data to consuming solutions in real-time. Users now gain on-demand data for quicker decision-making.

With this solution, new capabilities and benefits are available to Pfizer's Research Scientists Workbench including:

- Automated data-level development, freeing developers to work on application-level development while reducing the total development time in half
- Drag-and-drop development environment, built-in security and automated generation of Web services, requiring fewer specialized skills
- SOA-compliant Web Services Description Language (used for describing the functionality offered by a web service) data services providing data in the form needed by portal developers
- Loosely coupled data services that are easier to maintain than ETL and data delivery scripts when changes are made to the underlying data sources or the portal
- Reusable data service assets

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For More Information

To find out more about Cisco Data Virtualization, go to:
http://www.cisco.com/en/US/netsol/ns340/ns394/ns224/

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- Cisco Data Virtualization

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