**DB2 Database**

DB2 database software offers industry leading performance, scale, and reliability on your choice of platform from Linux, UNIX and Windows to z/OS. Learn how customers are transforming their data center with DB2.

**IBM® DB2® for Linux, UNIX and Windows** is the database of choice for robust, enterprise-wide solutions handling high-volume workloads. DB2 is optimized to deliver industry-leading performance while lowering costs.

**DB2 Security**

**Authentication**

Before attaching to a DB2 instance, or connecting to a DB2 database, users must authenticate. **Authentication** is the process of validating that users are who they claim to be. You can configure DB2 to authenticate users via the operating system, via a Lightweight Directory Access Protocol (LDAP) server, or via Kerberos.

**Authorization**

After a user is authenticated, DB2 performs an authorization check. **Authorization** is the process where the DB2 database manager verifies that a user is authorized to perform certain operations on specific data or resources. Users can be granted specific privileges to a given data resource or be given pre-defined roles known as authorities

**Trusted contexts**

**Trusted contexts** provide a way to build faster and more secure three-tier applications. Trusted contexts address many security concerns in the three-tier application model, such as loss of user's identity, user accountability, and the granting of unnecessary privileges to access certain information. Under DB2 trusted contexts, the user's identity is sent to DB2 within a trusted connection for audit and authorization purposes. Additionally, trusted contexts allow you to control when certain users can exercise the privileges granted to them. For example, you may use trusted contexts to limit a user to connecting to the database from certain IP addresses.

**Auditing**

DB2 includes an **audit facility** that allows you to monitor data access and provides information needed for subsequent analysis. Auditing can help discover unwanted, unknown, and unacceptable access to the data as well as keep history records of the activities on the database system.

**Row and Column Access Control**

DB2 includes **Row and Column Access Control** for fine-grained security. You can use Row and Column Access Control to restrict the rows and mask the columns that a user sees. The access control is transparent to the user; they are not aware of the existence of the unauthorized rows.

**Label-Based Access Control**

For the ultimate data access control, DB2 includes **Label Based Access Control (LBAC)**. LBAC provides multi-level security for managing classified data. Once the LBAC rules have been defined, data access control is managed by DB2 and is completely transparent to the user.

**Encryption**

You can prevent hackers from seeing your data while it's being transmitted through the network using **DB2 encryption** mechanisms. DB2 supports encryption of user ID, password and data while in transit. You can also use the DB2 Secure Socket Layer (SSL) capability to encrypt your client-to-server communication using state-of-the-art encryption technology.

**EMC Isilon**

Isilon designed and developed its clustered storage systems specifically to address the needs of storing, managing and accessing digital content and other unstructured data.[[4]](http://en.wikipedia.org/wiki/EMC_Isilon#cite_note-Isilon_Systems.2C_Inc._Form_10-K-4) An Isilon clustered storage system is composed of three or more nodes. Each node is a self-contained, rack-mountable device that contains industry standard hardware, including disk drives, CPU, memory and network interfaces, and is integrated with proprietary operating system software called [OneFS](http://en.wikipedia.org/wiki/OneFS) (based on [FreeBSD](http://en.wikipedia.org/wiki/FreeBSD)[[5]](http://en.wikipedia.org/wiki/EMC_Isilon#cite_note-5)), which unifies a cluster of nodes into a single shared resource.[[6]](http://en.wikipedia.org/wiki/EMC_Isilon#cite_note-6)

**BigInsights**

IBM InfoSphere BigInsights brings the power of [Hadoop](http://www-01.ibm.com/software/data/infosphere/hadoop/) to the enterprise. Apache™ Hadoop® is the open source software framework, used to reliably managing large volumes of structured and unstructured data.

BigInsights makes it simpler for people to use **Hadoop** and build big data applications. It enhances this open source technology to withstand the demands of your enterprise, adding administrative, discovery, development, provisioning, and security features, along with best-in-class analytical capabilities from IBM Research. The result is that you get a more developer and user-friendly solution for complex, large scale analytics.

InfoSphere BigInsights allows enterprises of all sizes to cost effectively manage and analyze the massive volume, variety and velocity of data that consumers and businesses create every day. InfoSphere BigInsights can help you increase operational efficiency by augmenting your data warehouse environment. It can be used as a query-able archive, allowing you to store and analyze large volumes of multi-structured data without straining the data warehouse. It can be used as a pre-processing hub, helping you to explore your data, determine what is the most valuable, and extract that data cost-effectively.