Accelerating Big Data Deployment in the Enterprise

The **BlueData EPIC™ software platform** solves the challenges that can slow down and stall Big Data initiatives. It makes deployment of Big Data infrastructure easier, faster, and more cost-effective – eliminating complexity as a barrier to adoption.

**Big Data Infrastructure Software**

With BlueData EPIC (Elastic Private Instant Clusters) software, you can deploy Hadoop and Spark clusters in minutes rather than months – with the data and analytical tools that your data scientists need. It can deliver Hadoop-as-a-Service or Spark-as-a-Service in an on-premises deployment model.

The BlueData software platform leverages virtualization technology and patent-pending innovations to deliver self-service, speed, and efficiency for Big Data environments:

- **ElasticPlane™** enables users to spin up virtual clusters on-demand in a secure, multi-tenant environment.
- **IOBoost™** ensures performance on par with bare-metal, with the agility and simplicity of Docker containers.
- **DataTap™** accelerates time-to-value for Big Data by eliminating time-consuming data movement.

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**PRODUCT HIGHLIGHTS**

- **Increase business agility** by empowering data scientists and analysts to create Big Data clusters in a matter of minutes, with just a few mouse clicks.
- **Simplify on-premises deployments** with a turnkey Big-Data-as-a-Service solution, including pre-packaged images for major Hadoop distributions and Spark.
- **Deliver faster time-to-insights** with pre-integrated images for leading business intelligence, analytics, visualization, and data preparation tools.
- **Minimize the need to move data** by separating compute and storage – enabling Big Data analysis using any enterprise shared storage system.
- **Maintain security and control** in a multi-tenant environment, integrated with your enterprise’s security model (e.g. LDAP, Active Directory, Kerberos).
- **Achieve cost savings** of up to 75% by improving hardware utilization, eliminating cluster sprawl, and minimizing data duplication.

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Big Data Infrastructure Made Easy

Today, most Big Data deployments meet the needs of multiple user groups (or tenants) with multiple, dedicated physical servers on-premises. This approach can be complex, expensive, and time-consuming. It often takes several weeks to provision the systems and infrastructure required for a new Hadoop cluster.

BlueData EPIC is an infrastructure software platform designed to simplify and accelerate on-premises Big Data deployments. By combining BlueData’s software innovations with the power of Docker containers, multi-tenant deployments that may have taken months can now be completed within a couple days.

With BlueData, data scientists and analysts can create their own virtual Hadoop or Spark clusters on-demand within minutes. They can also spin up clusters for their Big Data analytics tools of choice, while accessing data from any shared storage system. IT administrators have complete visibility and control, in a multi-tenant environment with secure data isolation. And IT architects can ensure interoperability with existing infrastructure and systems for enterprise-grade production deployments.

BlueData installs as a software layer between the underlying physical infrastructure and the Big Data distributions and applications. The use of containers is completely transparent, but BlueData customers benefit from greater performance and deployment flexibility due to their lightweight nature. They can deliver faster time-to-value for Big Data, providing the benefits of Hadoop-as-a-Service or Spark-as-a-Service in their own data center.

KEY FEATURES

Self-Service Big Data Clusters
Users can easily create instant Hadoop or Spark clusters with BlueData EPIC’s ElasticPlane functionality. New virtual clusters are provisioned on-demand – whether for Big Data applications in a lab, a development and testing environment, or a production deployment.

Data scientists and analysts can now quickly respond to dynamic business requirements by running a variety of jobs ranging from analytical SQL to Spark machine learning scripts against their data, with just a few mouse clicks.

Secure Multi-Tenancy
Different project teams, groups, or departments across the enterprise can share the same physical infrastructure – and access the same data sources – for their Big Data analytics. BlueData provides multi-tenancy and data isolation to ensure logical separation between each project, group, or department within the organization. The platform integrates with enterprise security and authentication mechanisms such as LDAP, Active Directory and Kerberos.

Containers and Bare-Metal Performance
BlueData has developed patent-pending I/O optimization innovations to deliver the benefits of containers and virtualization for Big Data, while ensuring performance comparable to that of bare-metal servers. EPIC’s IOBoost functionality provides application-aware caching and elastic resource management that adapts dynamically to changing application requirements, delivering the best possible performance.

Big Data Tools of Choice
The BlueData EPIC platform is pre-integrated with the most popular Big Data tools and applications. For example, you can create standalone Spark clusters independent of a Hadoop distribution. You can also spin up multiple virtual clusters using different Hadoop distributions as well as different versions of the same distribution on common infrastructure. And you can quickly deploy virtual clusters for business intelligence, analytics, data preparation (e.g. ETL), or search tools on the same physical infrastructure.

Data Access from Any Storage
With EPIC’s DataTap capability, you can access data from any shared storage system (including HDFS as well as NFS, GlusterFS, CEPH, and Swift) for your Big Data analysis. That means you don’t need to make multiple copies of data or move data into HDFS, before running your analysis. Sensitive data can stay in your secure storage system with enterprise-grade data governance, without the cost and risks of creating and maintaining multiple copies.

Compute and Storage Separation
BlueData disconnects analytical processing from data storage, giving you the ability to independently scale compute and storage on an as-needed basis. With BlueData EPIC, you also have unparalleled flexibility to mix and match different server generations for your Big Data needs. This enables more effective utilization of compute resources, more flexibility on server/storage configurations and, as a result, lower data center operating costs.

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