

HPE EZMERAL DATA FABRIC

An exabyte-scale data fabric for success with AI, analytics, and containers in a hybrid cloud



EXECUTIVE SUMMARY

Enterprises are aggressively pursuing strategies to harness the power of data, analytics, and artificial intelligence (AI). Simultaneously, there is a major shift in infrastructure strategies with hybrid cloud and Kubernetes containerization being adopted at unprecedented rates.

This journey is a multistep process with many different crucial decisions along the way. **HPE Ezmeral Data Fabric** software (formerly the MapR Data Platform) ingests, stores, and manages data on a vast scale to make it readily available to new computation techniques and tools. HPE Ezmeral Data Fabric integrates with the HPE Container Platform and enables the deployment of data-driven applications on Kubernetes at scale on any infrastructure—on-premises, in multiple public clouds, or at the edge.

THE CASE FOR A NEW DATA FABRIC

Data is becoming a company's most important asset. Forward-leaning companies understand this new data economy—when

they leverage data more effectively than their competitor, they win market share. Last generation and even newer point product technologies cannot solve the new demands. Furthermore, data is being democratized. The data scientist and developer are now more efficient when they can select their own tools and get to the relevant data securely and easily. Fundamentally, this requires a new underlying data fabric, which can meet the needs of the data scientist for accessing innovative new tools at a rapid rate, while also providing the industrial-grade reliability and security that IT organizations insist on. As a result, a 30-year re-platforming process is in progress.

The problem is that it is easy to fall into the trap of choosing many point solutions and not think about the foundational importance of a data fabric. Experience makes it clear that history will repeat itself with limited point solutions and more silos, unless a deliberate decision is made to architect and build on the right foundation. The success rate of applying AI and analytics at production depends on a data fabric foundation. The HPE Ezmeral Data Fabric is optimized for mission-critical capabilities, linear scalability, elasticity, and the ability

to deploy seamlessly in a hybrid cloud world, while also harnessing the power of Kubernetes containerization for elasticity. A data fabric that can support the innovation to come in the years ahead and enable an enterprise-wide data fabric becomes of paramount importance.

THE HPE VISION OF A DATA FABRIC

A unique and groundbreaking approach is needed, which combines essential new tool technologies, such as Hadoop, Spark, machine learning (ML), and AI tools, while optimizing for high scale, reliability, and elasticity through containerization. Also critical is global deployment flexibility by bridging seamlessly from on-premises to the edge, or to one or more clouds. The HPE Ezmeral Data Fabric is architected, designed, and implemented using a set of principles to meet essential customer criteria for making a thoughtful data fabric selection:

1. **Supports a variety of data** from big to small, structured and unstructured, in tables, streams, or files, Internet of Things (IoT), and sensor data—essentially every data type from any data source, including a range of ingest mechanisms
2. **Helps diverse computational tools and frameworks**, such as Hadoop, Spark, ML, TensorFlow, and Caffe
3. **Runs AI and analytics applications simultaneously**, without requiring multiple clusters or silos, which means faster time to market, less maintenance engineering, and more consistent results, due to the same data sets being used by data scientists and analysts

4. **Delivers broad range of open APIs** for with no lock-in—POSIX, HDFS, S3, JSON, HBase, Kafka, REST
5. **Offers pub-sub streaming and edge first** for all data-in-motion from any data source, including IoT sensors
6. **Is trusted** by design—security is built in, not bolted on
7. **Provides reliability, security, and scale** to operate in global, mission-critical production AI and analytic applications
8. **Eases data and application movement between on-premises and in-cloud** through stateful application support with Kubernetes
9. **Operates on every cloud**, a critical must-have so that a customer can experience cloud economics and no cloud lock-in across multiple public clouds and on-premises data centers
10. **Enables a global data fabric** to simultaneously ingest, store, manage, process, apply, and analyze data

SUMMARY

HPE Ezmeral Data Fabric delivers on this fundamental challenge with its unique global, distributed data fabric for AI and analytics applications at production scale. This is possible because the underlying data fabric provides unequalled scale, performance, and reliability to deliver a clear business value and competitive advantage.

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