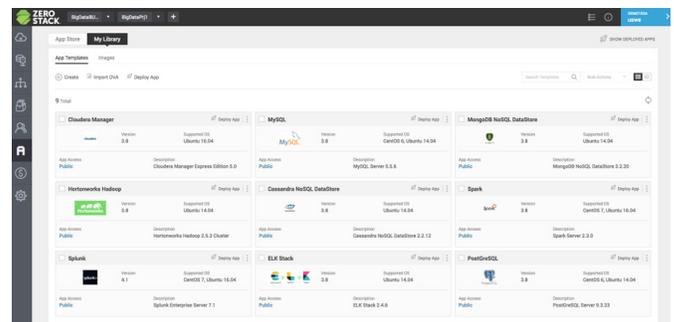# ZeroStack Big Data-as-a-Service

Deliver Big Data tools and services on demand

The volume, velocity, and variety of data that is being generated today has overwhelmed the capabilities of current infrastructure and analytics solutions. We are now experiencing Moore's law for data growth: data is doubling every 18 months. IDC forecasts that by 2025, the global datasphere will grow to 163 zettabytes (that is a trillion gigabytes). That's ten times the data generated in 2016.

In order to solve this data explosion challenge, modern Big Data solutions must uses a slew of new tools such as Hadoop, Spark, Tensor Flow (for deep learning) and NoSQL databases such as MongoDB, Cassandra, etc., which all have to be deployed, integrated, and operated as a whole. Additionally, these use cases have widely varying demands on the underlying infrastructure for performance, latency, and capacity requirements. Operating this diverse set of requirements manually can be daunting, time-consuming, and expensive.

ZeroStack's Big Data-as-a-Service capability gives customers powerful features to automate deployment, integration, and operations of a variety of popular and modern Big Data tools, providing self-service options to data scientists and developers while allowing the cloud administrator to maintain control via quota management and fine-grained access control.

Users have access to several Big Data tools they can deploy with a few clicks into their private workbench environment

About ZeroStack

ZeroStack Intelligent Cloud Platform is a fully-integrated cloud solution that delivers the simplicity and agility of a public cloud, along with the performance and control of a private cloud, at a fraction of the cost.

ZEROSTACK BIG DATA-AS-A-SERVICE:
Self-Service Big Data Tools with IT Control

Built-in App Store with a variety of Big-Data applications	The built-in App Store offers pre-built application templates that enable customers to deploy Big Data applications with ease. Some of the example templates include the following; • Big Data applications such as Apache Hadoop, Cloudera Express, and Spark • SQL and NoSQL databases such as Cassandra, Redis, MongoDB • Monitoring and data analysis tools such as ELK, Splunk • Application servers such as Apache and Nginx • Container tools such as Kubernetes and Docker
Built-in governance and fine-grained access control of underlying infrastructure resources	Cloud administrators can control which business units have access to which apps while specifying usage quotas for storage, networking, and CPU resources
Self-service ready	ZeroStack Big Data-as-a-Service is easy to use once access is provided by the cloud admins. Users deploy their own apps from the app store, network distributed apps using the built-in software-defined networking, monitor usage and plan capacity, troubleshoot and correlate issues using the built-in tools
Built-in production operational capabilities	For field maintenance, administrators can add and remove physical hosts following host evacuation workflow best practices. The ZeroStack cluster can be scaled up on demand by adding new physical nodes to the cluster

ZEROSTACK BIG DATA-AS-A-SERVICE
Use Cases

MSPs who want to provide a Big Data service to their end customers	**IoT and Machine Learning applications**	**Agile Operations**
Automated deployment of Big Data tools, self-service option for end users, controlling customer access to infrastructure resources as well as cost management make ZeroStack Big Data-as-a-Service an attractive new revenue source for MSPs.	Multiple GPU capabilities, dedicated/full GPU access, streaming analytics tools, small footprint, and self-service make this attractive for enterprises and universities who want to develop IoT and ML applications.	ZeroStack's self-healing features, software-defined networking and storage as well as seamless upgrades and scalability can now be used with GPU applications as well.