

# CREATE A SINGLE TRUSTED VIEW OF ALL DATA, FROM EDGE TO CLOUD

## Data Transformation Services from HPE Pointnext Services

Design and deploy an environment that combines all data from various data sources to create a unified hub where data can be securely treated and accessed for enterprise-wide analysis and integration.

### Data management, plus much more

Consisting of both products and services, a data platform creates a cohesive view of data from multiple sources, makes data available throughout the enterprise (based on permissions), and improves data governance. When you work with HPE Pointnext Services experts to design a data platform tailored to your needs, you can significantly increase:

- **Availability**—Enables users to access the right data at the right time, with no delays in processing high volumes of data or data requests.
- **Governance**—Helps businesses better manage their governance strategy, including what data is collected, who can access it, and when data has “expired,” according to data protection and privacy regulations such as General Data Protection Regulation (GDPR).
- **Security**—Delivers a single point of access via modern authentication tools such as SSO to ensure authorization for users; enables you to easily keep track of who can access data via the platform.
- **Speed**—Includes scheduling dashboards, reports, and proactive alerts for predetermined conditions; helps eliminate bottlenecks and deliver reliable, accurate data to authorized users at the moment of relevance; and uses APIs to deliver data to specialized tools for data science and AI/machine learning (ML) workflows.
- **Trust**—Brings together data from multiple sources, bridging organizational silos to support more collaborative and effective decision-making.

### FOR TODAY AND TOMORROW, IT’S ALL ABOUT DATA

No longer looming on the horizon, digital transformation is here, and it is revolutionizing business practices. At the cornerstone of every digital transformation effort is data.

For any digital transformation to be successful, it must also include the transformation and consumption of data. That data needs a solid foundation in the form of a data platform. Such a transformation encompasses more than the traditional “extract, transform, and load” (ETL) processes of collecting, cleansing, reformatting, and storing data. Data transformation also includes the subsequent analysis and use of collected (real-time) data to inform a company’s decision-making, operations, and high-level digital transformation strategies.

As today’s enterprises tackle their digital transformation projects, they face numerous data challenges:

- **Access**—Inability to search, explore, and analyze data—audio, video, voice, text, streaming—for artificial intelligence (AI)/advanced analytics; data structures are often fragmented and widely distributed due to inconsistent or incorrectly formatted data and data silos.
- **Trust**—Lack of data governance, sharing, and trust, compounded by security issues.

- **Speed**—Adding new data sources, as well as developing and testing new AI models and applications, is a time-consuming process. Some studies estimate that data scientists traditionally spend as much as 80% of their time on such data housekeeping tasks.
- **Cost**—Controlling the exponential rise in data management costs as well as extending AI use cases beyond the pilot stage, integrating unstructured data, interfacing with open-data platforms, and managing multiple siloed data systems are increasingly costly activities.
- **Consistency**—Maintaining control of the variable quality of incoming data, and the regularity and correct synchronization of the flows of such data.

### CREATING A CENTRALIZED DATA HUB

To help enterprises overcome these challenges, HPE Pointnext Services developed a portfolio of Data Transformation Services for on-premises, hybrid cloud, and Microsoft Azure. Much more than data management, a data platform is a technology solution stack (consisting of both products and services) integrated together to enable you to ingest, process, store, access, analyze, and present massive volumes of data. An HPE-designed data platform acts as a unified hub where one set of consistent data can be securely accessed for analysis and integrations.

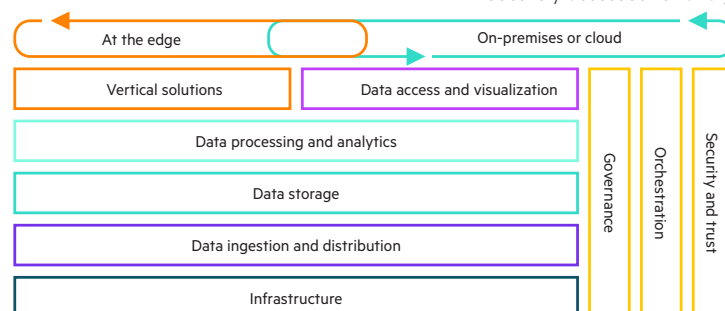


FIGURE 1. Data platform at a glance

**Did you know?**

- By 2023, 70% of Global 2000 companies will have metrics in place to evaluate the value realized from data, with companies at more mature stages gaining resource allocation agility and efficiency as compared to competitors.<sup>1</sup>
- By 2024, the productivity gap will double between enterprises that deploy ML-enabled data management, integration, and analysis to automate IT and analytics-related tasks and those that do not.<sup>2</sup>
- By 2022, one-third of Global 2000 companies will have formal data literacy improvement initiatives in place to drive insights at scale, create sustainable trusted relationships, and counter misinformation.<sup>3</sup>

<sup>1, 2, 3</sup> IDC, "Worldwide Digital Transformation Strategies," August 2020.

**Putting your data transformation strategy to work**

When building a data platform, some organizations choose a "big bang" approach, where they build the entire data platform first, and then apply it to individual use cases. Other companies incrementally build their data platform based on use case needs and adoption. Regardless of the deployment approach, the resulting data platform can support a variety of use cases including:

- Smart cities
- Autonomous driving
- Banking/financial services
- Container-based solutions for healthcare and life sciences

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Designed to advance your enterprise from initial planning through deployment, the services help you define a solution that includes five critical function areas:

1. **Data ingestion and distribution**—Transporting data from multiple disparate sources to the appropriate storage medium, where it can be accessed, used, and analyzed by users.
2. **Data storage**—Housing data on the right storage tier (flash, SSD, SAS, SATA, or tape) to meet performance/latency and cost-efficiency requirements.
3. **Data processing and analytics**—Completing ETL procedures, and then examining the data to identify trends and patterns, and test hypotheses to support business growth.
4. **Data access and visualization**—Providing users with role-related access to data, and then providing graphical/visual representation of the data in the form of charts, graphs, and maps.
5. **Data platform governance and orchestration**—Ensuring continuous compliance with government and industry standards, and automating the data-driven processes enterprise-wide.

**PORTFOLIO OF PRODUCTS AND SERVICES**

To help accelerate your organization's digital transformation, HPE Pointnext Services offers a complete portfolio of data transformation services.

Workshop	Capability assessment	Design	Agile implementation
Align the business and IT; gain stakeholder support and common understanding.	Evaluate the future data platform and assess what to retire, what to modernize and what to adopt.	Design the data platform and plan the implementation on-premises or in hybrid cloud.	Customized implementation including infrastructure, software, and integrations with operational guidelines.
<ul style="list-style-type: none"> <li>• Understand the scope, scale, and critical success factors</li> <li>• Identify quick wins that generate momentum</li> <li>• Leverage best practices from consolidation, automation, cloud-like experience and containerization</li> </ul>	<ul style="list-style-type: none"> <li>• Assess the maturity of your data platform</li> <li>• Evaluate the effort for achieving the future data platform</li> <li>• Understand what to discard, what to save, what to modernize, what new to adopt</li> </ul>	<ul style="list-style-type: none"> <li>• Design based on target use cases, functional and non-functional requirements</li> <li>• Integration plan, standards to support advanced analytics (AI/ML), new use cases, new data flows</li> <li>• Infrastructure and operation guidelines</li> <li>• Reference architecture for Microsoft Azure</li> </ul>	<ul style="list-style-type: none"> <li>• Implementation of the designed data platform including infrastructure, software, and integrations</li> <li>• Operational guidelines</li> <li>• Trainings and knowledge transfer</li> </ul>

Depending on your needs, you can create a data platform that includes the right mix of the following:

- **Edge-to-cloud compute and storage**—HPE Apollo and HPE Cray supercomputing and high-performance platforms can support AI use cases, data lakes, object datastores, and high-throughput datastores offering high performance and supercomputing power. HPE Edgeline servers can support compute platforms at the edge. Bundled solutions/packages can meet your needs for supporting deep learning model training, inference, and industry-specific deployment needs leveraging GPUs and CPUs.
- **Software**—The HPE container-based framework addresses some of the key challenges you will face as you build and deploy ML models and develop smart data lake systems. HPE Ezmeral includes container, data fabric, and ML operations (MLOps) software. Specifically, HPE Ezmeral Data Fabric brings your data management and processing technologies together, combining data silos into a single exabyte-scale, edge-to-cloud distributed data fabric.
- **Open partner ecosystem**—To help you operationalize your data platform for AI, you can choose from a variety of open-source and third-party offerings to build the data platform that supports your business needs in hybrid cloud with partners such as Microsoft Azure.
- **Delivered as a service**—HPE GreenLake Cloud Services enable you to consume and manage your data and infrastructure (MLOps, storage, and compute) as a service.

**ABOUT HPE POINTNEXT SERVICES**

This global team of data scientists, solution architects, and technologists provide advisory, professional, and operational services for data platforms Cloud and AI from edge to cloud.

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