

Overview

HPE Machine Learning Data Management Software

The HPE Machine Learning Data Management solution is an open-source, enterprise-grade data science platform that allows customers to deploy and manage multi-stage, language-agnostic data pipelines while maintaining complete reproducibility and provenance.

The software offers a unique combination of data management features and pipeline automation. It supports the ingestion and versioning of terabyte-sized data sets in structured and unstructured form. Thanks to its understanding of “Diffs”, Machine Learning Data Management can trigger pipeline runs for distributed data transforms, training runs, and model deployments based on incremental data changes, while maintaining data and experiment lineage throughout the workflow.

HPE Machine Learning Data Management empowers data engineering teams to automate complex data pipelines. Its unique architecture is cost-effective at scale and enables sophisticated data transformations with any type of data. It provides auto-scaling and parallelized processing of multi-stage, language-agnostic pipelines with data versioning and data lineage tracking.

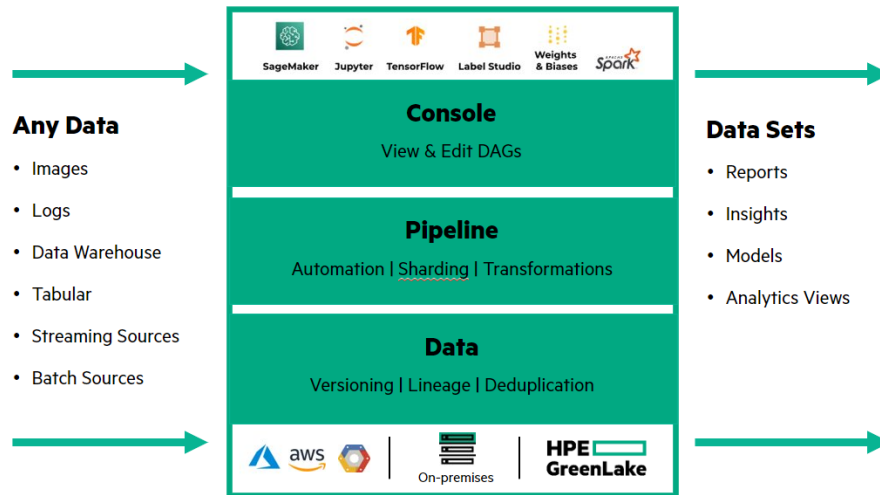
This solution shifts the paradigm of data science workflows by providing reproducibility, data provenance, and opportunity for true collaboration. HPE Machine Learning Data Management utilizes modern technologies like Docker and Kubernetes to build an entirely new method of processing data. It also brings together version-control for data and the tools to build scalable end-to-end ML/AI pipelines, while empowering users to use any language, framework, or tool to process the data.

What's new?

- Generate simpler, clearer, and easy to debug code with the improved Python SDK.
 - Unlock agility with automated data transformations with data versioning and lineage.
 - Protect confidence in your confidentiality with role-based access controls and pluggable authentication.
 - Connect and deploy aaS across all major cloud providers and on-premises installations.
 - Container-native storage improves flexibility by supporting any programming language.
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Standard Features

HPE Machine Learning Data Management Software Platform



Data Driven Pipelines

Data-driven pipelines are intelligently triggered by detecting changes to data. Delivers incremental processing, by triggering pipeline execution only for new data. This makes a dramatic difference over time, flattening a geometric increase in processing resources that is needed when old data is reprocessed alongside new data in legacy architectures.

Automatic, Immutable Data Lineage

Data lineage allows users to trace every step of their data pipelines, including changes in the input data, the code and the relationship between them.

This capability is particularly valuable when documenting or auditing the data preparation process for ML model training, where all the data and the transformation steps used for the training must not only be properly registered, but they must also be available, if there is a need to reproduce the entire training process.

Data lineage can be used to identify changes quickly and easily in the format of input data that might impact the processing, or the performance of ML models trained with this data. New versions of underlying libraries or packages may also introduce incompatibilities that could impact the data processing pipelines, producing undesirable results.

Data Versioning

Data versioning follows a similar approach to version control systems, like Git, using concepts like repositories, branches, commits, etc. Data versions can be stored permanently or purged as needed. HPE Machine Learning Data Management doesn't just version the data; instead, it keeps an entire audit trail of the data transformation process, including files, metadata, parameters, code, annotations, and any other data artifacts that are generated throughout the workflow.

All stored data is completely deduplicated on the backend, to optimize storage. This is done as a decoupled process, to ensure that performance will never be impacted, regardless of the amount or age of the data being tracked.

Reproducibility

Users can easily reconstruct any previous state of their data and analysis with perfect consistency. HPE Machine Learning Data Management leverages Docker and Kubernetes, with data pipelines running inside containers. This allows pipeline steps to be executed always under the same conditions, delivering exactly the same results every time.

Standard Features

Scalable Platform

Data pipelines can be executed in parallel across multiple (up to thousands) of worker nodes. This capability helps our customers reduce their data processing time from weeks to hours.

The solution runs on an auto-scalable platform (Kubernetes), leveraging the ability to provision additional compute capacity to support peaks in data processing workloads.

Security and Access Control

Support for Single Sign-on, through OpenID Authentication and Role Based Access Control (RBAC) capability allows administrators to restrict user access to clusters, projects and repositories.



Configuration Information

Product Licenses

HPE Machine Learning Data Management Software (MLDMS) must be licensed to unlock scaling limits, enable enterprise features, and allow software download and support from HPE.

Licensing and Renewals follow a two-tier model:

- A minimum of 1 enterprise license for the product is required per customer, and
- A minimum of 1 user entitlement is required per customer. Additional user entitlements should be included for each user of the product.

If the licensing rules are unclear for your specific usage, please contact the local sales representative before ordering.

Step 1 - Select The Enterprise Licenses:

- One enterprise license is required per customer.
 - An Enterprise License is a type of software licensing agreement that grants a company the right to use a specific software product across its entire organization within a designated site or location.
 - In most cases, enterprise customers will only need one (1) Enterprise license.
- Select the appropriate tenure of subscription for that enterprise license (1-, 3-, 4- and 5-year terms are available).
- Customers can acquire a unique enterprise license key from the HPE Software Portal.
- Enterprise licenses do not include any user entitlements. Those will be configured in Step 2.

Enterprise License (Minimum 1 per designated location)

Description	SKU
HPE Machine Learning Data Management Software 1-year Subscription E-LTU	S1S86AAE
HPE Machine Learning Data Management Software 3-year Subscription E-LTU	S2R35AAE
HPE Machine Learning Data Management Software 4-year Subscription E-LTU	S3P92AAE
HPE Machine Learning Data Management Software 5-year Subscription E-LTU	S3P94AAE

Step 2 - Select The User Entitlements:

- A user is defined as a single entity authenticated by the identity provider for access to the product.
- Select the additional user license matching the term of the enterprise license e.g., 5-year enterprise requires 5-year user.
- A minimum of one user entitlement is required per enterprise license. Add incremental user entitlements as needed.
- The user entitlement conveys a “right to use” the product for the specified number of users. No license key is generated, apart from that provided with the enterprise license.

User Entitlement (Minimum 1 per enterprise license)

Description	SKU
HPE Machine Learning Data Management Software Additional User 1Yr E-RTU	S1S87AAE
HPE Machine Learning Data Management Software Additional User 3Yr E-RTU	S3P91AAE
HPE Machine Learning Data Management Software Additional User 4Yr E-RTU	S3P93AAE
HPE Machine Learning Data Management Software Additional User 5Yr E-RTU	S3P95AAE

Step 3 - Verify The Combinations:

- Do you have at least ONE enterprise license for each customer?
- Do you have at least ONE user entitlement associated with every enterprise license?
- Does the subscription tenure of each enterprise license and its corresponding user entitlements match?

Examples:

1 customer, 5 users, 3-year term

- Enterprise license:
 - 1x HPE Machine Learning Data Management Software 3-year Subscription E-LTU S2R35AAE
- User entitlements:
 - 5x HPE Machine Learning Data Management Software Additional User 3Yr E-RTU S3P91AAE

Service and Support

HPE Support

HPE Tech Care Service enables direct access to product-specific specialists and provides general technical guidance to help customers not only reduce risk but also find ways to do things more efficiently. HPE Tech Care Service Customers can access support through multiple channels that include telephone, a real-time chat facility, automated incident logging, and HPE moderated forums with defined response times.

HPE 1Y Tech Care Basic Service

- **Expert access:** 9x5, 2hr response
- **Outage SLA:** Standard elevation

HPE 1Y Tech Care Essential Service

- **Expert access:** 24x7, 15 min severity 1 response
- **Outage SLA:** Standard elevation

HPE Services

No matter where you are in your digital transformation journey, you can count on HPE Services to deliver the expertise you need when, where and how you need it. From planning to deployment, ongoing operations and beyond, our experts can help you realize your digital ambitions.

<https://www.hpe.com/services>

Consulting Services

No matter where you are in your journey to hybrid cloud, experts can help you map out your next steps. From determining what workloads should live where, to handling governance and compliance, to managing costs, our experts can help you optimize your operations.

<https://www.hpe.com/services/consulting>

HPE Managed Services

HPE runs your IT operations, providing services that monitor, operate, and optimize your infrastructure and applications, delivered consistently and globally to give you unified control and let you focus on innovation.

[HPE Managed Services | HPE](#)

Operational services

Optimize your entire IT environment and drive innovation. Manage day-to-day IT operational tasks while freeing up valuable time and resources. Meet service-level targets and business objectives with features designed to drive better business outcomes.

<https://www.hpe.com/services/operational>



Service and Support

HPE Lifecycle Services

HPE Lifecycle Services provide a variety of options to help maintain your HPE systems and solutions at all stages of the product lifecycle. A few popular examples include:

- Lifecycle Install and Startup Services: Various levels for physical installation and power on, remote access setup, installation and startup, and enhanced installation services with the operating system.
- HPE Firmware Update Analysis Service: Recommendations for firmware revision levels for selected HPE products, taking into account the relevant revision dependencies within your IT environment.
- HPE Firmware Update Implementation Service: Implementation of firmware updates for selected HPE server, storage, and solution products, taking into account the relevant revision dependencies within your IT environment.
- Implementation assistance services: Highly trained technical service specialists to assist you with a variety of activities, ranging from design, implementation, and platform deployment to consolidation, migration, project management, and onsite technical forums.
- HPE Service Credits: Access to prepaid services for flexibility to choose from a variety of specialized service activities, including assessments, performance maintenance reviews, firmware management, professional services, and operational best practices.

Notes: To review the list of Lifecycle Services available for your product go to:

<https://www.hpe.com/services/lifecycle>

For a list of the most frequently purchased services using service credits, see the [HPE Service Credits Menu](#)

Other Related Services from HPE Services:

HPE Education Services

Training and certification designed for IT and business professionals across all industries. Broad catalogue of course offerings to expand skills and proficiencies in topics ranging from cloud and cybersecurity to AI and DevOps. Create learning paths to expand proficiency in a specific subject. Schedule training in a way that works best for your business with flexible continuous learning options.

<https://www.hpe.com/services/training>

Defective Media Retention

An option available with HPE Complete Care Service and HPE Tech Care Service and applies only to Disk or eligible SSD/Flash Drives replaced by HPE due to malfunction.

Consult your HPE Sales Representative or Authorized Channel Partner of choice for any additional questions and services options.

Parts and Materials

HPE will provide HPE-supported replacement parts and materials necessary to maintain the covered hardware product in operating condition, including parts and materials for available and recommended engineering improvements.

Parts and components that have reached their maximum supported lifetime and/or the maximum usage limitations as set forth in the manufacturer's operating manual, product quick-specs, or the technical product data sheet will not be provided, repaired, or replaced as part of these services.

How to Purchase Services

Services are sold by Hewlett Packard Enterprise and Hewlett Packard Enterprise Authorized Service Partners:

- Services for customers purchasing from HPE or an enterprise reseller are quoted using HPE order configuration tools.
- Customers purchasing from a commercial reseller can find services at <https://ssc.hpe.com/portal/site/ssc/>



Service and Support

AI Powered and Digitally Enabled Support Experience

Achieve faster time to resolution with access to product-specific resources and expertise through a digital and data driven customer experience.

Sign into the HPE Support Center experience, featuring streamlined self-serve case creation and management capabilities with inline knowledge recommendations. You will also find personalized task alerts and powerful troubleshooting support through an intelligent virtual agent with seamless transition when needed to a live support agent.

<https://support.hpe.com/hpesc/public/home/signin>

Consume IT On Your Terms

HPE GreenLake edge-to-cloud platform brings the cloud experience directly to your apps and data wherever they are—the edge, colocations, or your data center. It delivers cloud services for on-premises IT infrastructure specifically tailored to your most demanding workloads. With a pay-per-use, scalable, point-and-click self-service experience that is managed for you, HPE GreenLake edge-to-cloud platform accelerates digital transformation in a distributed, edge-to-cloud world.

- Get faster time to market.
- Save on TCO, align costs to business.
- Scale quickly, meet unpredictable demand.
- Simplify IT operations across your data centers and clouds.

To learn more about HPE Services, please contact your Hewlett Packard Enterprise sales representative or Hewlett Packard Enterprise Authorized Channel Partner. Contact information for a representative in your area can be found at "Contact HPE"

<https://www.hpe.com/us/en/contact-hpe.html>

For more information

<http://www.hpe.com/services>



Summary of Changes

Date	Version History	Action	Description of Change
01-Apr-2024	Version 4	Changed	Updated Product SKUs, Information and Configuration sections
04-Dec-2023	Version 3	Changed	HPE Services Rebranding
06-Nov-2023	Version 2	Changed	Addition of 3Yr License SKU. Configuration Information section was updated.
01-May-2023	Version 1	New	New QuickSpecs



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For hard drives, 1GB = 1 billion bytes. Actual formatted capacity is less.

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