HPE GreenLake

Ease data migration headaches

Table of contents

The edge is at the center of digital transformation. That's because the edge is where enterprises interact with their customers and governments interact with their citizens, where products are manufactured, and where employees work each day. And it's where everyday people interact, purchase, and explore. This is human interaction.

The edge is also where there is technology interaction. Here, artificial intelligence (AI), machine learning (ML), and automation continuously learn, predict, and adapt to changes, needs, and threats in real time. It enables enterprises to capture data and drive new experiences—creating innovative possibilities in every industry.

Diverse data types, multiple platforms, and silos

Edge computing also presents new challenges. One of the biggest challenges involves how to handle the overwhelming volume of data created at the edge. According to a recent Statista report, the number of Internet of Things (IoT) devices worldwide is forecast to almost triple from 9.7 billion in 2020 to more than 29 billion IoT devices in 2030.[1] So, enterprises must effectively connect, analyze, and act on data from these devices—across all applications and locations.

The sheer magnitude of data at the edge requires a radical shift in the way organizations design and operate their networks. The way information is absorbed and analyzed must also change.

That's because organizations store diverse data types across multiple platforms, such as on-premises data centers, multiple clouds, and at the distributed edge. Each environment becomes an independent silo that restricts access to the data and the insights they contain. This means enterprises are struggling to use data to innovate and drive their business forward.

To effectively use this vast amount of data, organizations must migrate simply and cost-effectively. This migration is becoming a headache for many enterprises and the problem continues to grow each day. Overcoming siloed data is not only a technical challenge; it also requires fundamental changes to organizational skills, ways of working, and how data is treated.

This white paper discusses how you can ease your data migration headaches. To achieve this goal, enterprises worldwide need to explore two very different aspects of the challenge.

You must put services in place to achieve the following:

• Start your digital transformation journey in the right direction

• Manage your data across sites with a single, logical foundation

[1] "Number of Internet of Things (IoT) connected devices worldwide from 2019 to 2021, with forecasts from 2022 to 2030," Statista, August 2022

Start smart. Transform in the right direction.

A successful digital transformation has an enormous impact on every organization, with larger transformations touching every department. Demands to deliver value at a faster pace, lines of business that are unsure about IT's innovation capabilities, and concerns that they are not on pace with competition or concerns of being disrupted are all common drivers. But the transformation is not easy and will require a holistic approach. It must be specific to each organization to get the most value out of the new operating model.

In most cases, organizations initially try to achieve technical and operational excellence, which is realistic for an IT department to address. They develop a strategy and approach that deliver high-value imperatives and lay the foundation for widespread transformation. Critical change agents start to build consensus and buy-in across the organization and lead by example. Organizations monitor their effectiveness and prioritize improvements in their backlogs naturally.

Then something interesting happens, an inflection point—where IT organizations develop broad reach and scale that starts to satisfy enterprise or organizational business demand. They reach a level of proficiency and expertise where they are beginning to help their business partners differentiate their digital products, services, and customer experiences. Organizations start to attract top talent while IT and business operations reach a level of synergy where new business outcomes are achieved via rapid experimentation and innovation. What started as a transformation to provide a technical focus on availability, resilience, and compliance is now enabling new business outcomes at scale.

Unlock value with a tested process

How do you unlock the full potential of an edge-to-cloud operating model? That's a great question and one that most enterprises don't have the expertise to answer.

Advisory and Professional Services—Expert advice and implementation take your digital transformation to the next level

Partnering with an advisory partner with years of experience in digital transformation is an ideal way to get knowledgeable advice that will increase your ability to succeed. Transformation must be holistic across several critical domains to operate successfully in today's hybrid environment.

HPE has developed a comprehensive HPE Edge-to-Cloud Adoption Framework to guide you through your transformation journey. We use this framework to break down the complexity of transformation, provide a repeatable and predictable approach to transformation success, and enable your organization to adapt our prescriptive approach that works with your unique ambitions, constraints, and risk appetite. Ultimately, this adoption framework accelerates your adoption of a modern cloud operating model and helps you understand and plan your transformation with a holistic view of the IT and business landscape.

We start with a simple question: "What are you investing in today?" There are several domains or capabilities that your investments go into. We have organized these domains within the framework on a 1–5 maturity scale. Each organization has different capability needs, but based on your business goals, we start evaluating your organization within each domain to develop an actionable road map that will prepare your people, processes, and technology for an edge-to-cloud transformation to your new, data-driven operating model. An effective road map should also include your transformation goals, potential outcomes, and key objectives—all while aligning key stakeholders from leadership, business, and IT.

After transformation maturity is identified, next comes putting together a backlog and high-level road map to help your organization drive toward identified objectives and outcomes.

Once an organization knows where they are today and in which direction investments need to go, they need to drive implementation, transformation, governance, decision-making, and more. A transformation business office helps you achieve this. It is a cross-functional governance body that defines strategy and drives implementation. HPE has been helping clients for many years develop and operate successful offices with a wide variety of mandates and missions.

Ultimately, the business office is there to deliver transformation realization. This is where organizations realize their digital imperatives. The transformation realization team defines a fit-to-purpose solution set to assist you as you begin to implement and realize your transformation and digital ambitions.

After you start to deploy solutions for specific use cases, new use cases and workloads with additional requirements will be identified. Requirements may include low latency, high volume, local data, tolerance to disconnection, or data privacy. Experts can guide you through all phases of these implementations. They will provide best practices to seamlessly add processes and technologies that ensure proper integration, security, and reduced costs.

Invest in expertise to help you meet business objectives

The effort required to transform is often broader than organizations can support on their own and there is often an urgency to accelerate the pace of transformation.

Transformation realization is a methodology that proactively organizes the investment needs to support an organization's ability to meet its digital or business goals. Experts mold edge-to-cloud operating model, platform and technology, along with modernization and migration requirements, which align with current capability gaps, budget, risk appetite, and desired speed of transformation while allowing value realization.

The benefits include:

• Reduced risk and IT operating cost

• Growth without sprawl

• Efficient operations

• Edge-to-cloud governance

• Business agility

• Compliance

• Collaboration

Start your digital transformation journey in the right direction with HPE. With many successful enterprise-centric, edge-to-cloud transformation engagements, the HPE Edge-to-Cloud Transformation Program service can help you succeed with the initial implementation and beyond. It accelerates your transformation with analysis and guidance while also providing continued expertise in decision-making, communications, training, and standards.

Manage your data across sites. Choose an effective foundation.

Enterprises today are using analytics, AI, and ML to innovate faster and run their operations more effectively. As you know, they've got lots of data to work with and it's growing exponentially.

Typically, data is stored in different formats across different geographies and different platforms, creating data silos. Connecting data across multiple sources is an enormous challenge. IT must ensure compliance and security of this disparate data, while data science and analytics teams struggle to access it to unlock its value.

Traditional data management solutions have not kept pace with the rapid growth of data and the changing requirements of the enterprise. That's because these solutions don't scale well, demand complex infrastructures for each system, and require a workforce with specialized management skill sets. As a result, migrating data is a huge headache due to outdated solutions that are both time-consuming and expensive.

Simplify access to all your data

To combat these issues, many are turning to data fabric technology, a design concept that serves as an integrated layer (fabric) of data and connecting processes. Data fabric unifies hybrid data stored across edge-to-cloud deployments into a single source of trusted data while dramatically speeding deployment.

A modern data fabric lets you increase productivity through corporate-wide access to data, increasing collaboration and data sharing. The single datastore enables data reuse by multiple use cases, applications, and users, which means users need to reserve less infrastructure for individual workloads or file types. And with industry-standard APIs fully supported, existing access patterns for users and apps can be preserved without requiring low-value refactoring.

A data fabric will also allow you to simplify hybrid data operations. A single management view lets you monitor and manage hardware, software, and services. You can also automate policies once and then apply that policy across global data sets for multi-tenancy, data resilience, security, and data placement. In addition, you can layer certified open source tools on top of the data fabric to provide real-time, in-place analytics. This feature saves time needed to integrate and configure community open-source tools.

Increase data integrity and trust by unifying and processing different data types into a single, logical datastore.

Gaining insights from your data is simple and fast with a modern data fabric. Data scientists and engineers can access a single, unified, and trusted platform that supports a broad range of APIs, languages, and protocols. A modern data fabric can also address multiple use cases, such as data analytics, AI/ML, and edge analytics. Applications can be deployed and processed on a full range of data types and workloads for all your AI/ML, analytics, data lakes, data lakehouses, data warehouses, or Hadoop instances.

Unify all your data with a fully managed approach

Managing distributed data across edge-to-cloud deployments is a challenge, slowing insights your business needs to gain a competitive advantage. A data fabric delivered as a fully managed, enterprise-grade cloud service is the best way to simplify access to all your data, reduce costs via pay per use, and meet compliance and performance needs. This service model allows you to set up, administer, and manage globally distributed data sets across edge-to-cloud deployments from a single management view. It also simplifies deployment and lowers risk by providing infrastructure in a pay-per-use model.

HPE Ezmeral Data Fabric reduces the cost of data analytics by providing a high-performance approach that can be managed, secured, and deployed edge to cloud. It's now easier to unify all your disparate data across on-premises, multicloud, and edge—all while delivering seamless access to a trusted source of data.

Next steps: Make data migration easy

Successful digital transformation for an enterprise can be difficult. You can increase your odds of success by working with experts to design the right program to meet your business needs. Building an effective foundation with a data fabric is also vital because it simplifies access and use of all your data—no matter where it's located.

Guide your digital transformation journey in the right direction and keep it on the right path. HPE can ease your data migration headaches.

Contact your HPE representative today to learn more and discover how your organization can:

- **Guide your digital transformation journey in the right direction with the** HPE Edge to Cloud Transformation Program.
- **Manage your data across sites using an effective foundation with** HPE Ezmeral Data Fabric

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