

# Performance Intensive Computing as a Service

AN IDC CONTINUOUS INTELLIGENCE SERVICE

IDC's *Performance Intensive Computing as a Service* (PIC-as-a-S or PICaaS) provides insights into end-user adoption trends on performance-critical compute and storage services offered by service providers and infrastructure vendors. Use cases and workloads include artificial intelligence, machine learning and deep learning, high-performance computing, big data and analytics, and engineering/technical applications – all delivered as a service. It examines opportunities for vendors as they seek to offer turnkey technology stacks as a service for single (dedicated or private) and multitenant (shared or public) deployments.

## Markets and Subjects Analyzed

- Public (shared), private (dedicated), and hybrid cloud-based infrastructure services for artificial intelligence, machine learning and deep learning, high-performance computing, big data and analytics, and engineering/technical use cases and workloads
- Supercomputing solutions delivered as off-the-shelf or bespoke offerings from services providers
- PICaaS intermediaries, software stacks, and service delivery variations
- PICaaS compute, storage, data management, and fabric connectivity technologies

## Core Research

- Worldwide PICaaS Historical Provider Share
- Worldwide PICaaS Provider Market Forecast
- PICaaS End-User Adoption Trends and Strategies
- PICaaS Provider Landscape
- PICaaS Intermediaries Landscape

In addition to the insight provided in this service, IDC may conduct research on specific topics or emerging market segments via research offerings that require additional IDC funding and client investment. To learn more about the analysts and published research, please visit: [Performance Intensive Computing as a Service](#).

## Key Questions Answered

1. How and what business cases are organizations making for deploying PIC use cases in the public cloud?
2. What are the different options for consuming PICaaS? What are the business cases buyers in support of such investments?
3. What technology stack requirements are for specific use cases related to PICaaS?
4. Who are the leading PICaaS vendors?
5. What are the specific technological requirements for these use cases? What are the various elements that go into consideration when evaluating PICaaS?
6. What technology stack do businesses run on premises. What are their challenges, what are their plans for as-a-service consumption, and have they started a shift to as-a-service consumption?
7. What are the challenges of migrating a PIC environment from on premises to as a service?

## Companies Analyzed

This service reviews the strategies, market positioning, and future direction of several providers in the PICaaS market, including: Alibaba, Amazon Web Services, Dell, Digital Realty, Equinix, Google, HPE, IBM, Lumen, Microsoft, Oracle, ReScale, and ScaleMatrix.