Cloud-based Water Analytics Market - Global Industry Size, Share, Trends, Opportunity, and Forecast, Segmented By Component (Solutions, Services), By Deployment Mode (Public Cloud, Private Cloud, Hybrid Cloud), By Application (Water Quality Monitoring, Leakage Detection & Management, Asset Management, Demand Forecasting & Consumption Analytics, Flood Monitoring & Disaster Management, Regulatory Compliance & Reporting, Wastewater Treatment Analytics), By Region & Competition, 2020-2030F

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Report description:

Market Overview

Global Cloud-based Water Analytics Market was valued at USD 18.43 Billion in 2024 and is expected to reach USD 35.37 Billion by 2030 with a CAGR of 11.48% through 2030. Cloud-based water analytics refers to the use of cloud computing platforms to collect, analyze, and manage water-related data in real time for monitoring, optimization, and predictive insights.

These platforms leverage sensors, IoT devices, AI algorithms, and big data analytics to track water quality, usage, distribution, leakages, and environmental impacts. By enabling centralized access to critical water data, cloud-based systems help utilities, industries, and governments enhance decision-making, optimize resource usage, and meet regulatory compliance. Unlike traditional water management systems, cloud-based analytics offer scalability, remote access, lower infrastructure costs, and seamless integration with smart city frameworks.

The market for cloud-based water analytics is rising due to increasing global water scarcity, aging infrastructure, and stringent environmental regulations pushing utilities and industries toward smarter solutions. Urbanization and industrialization have

intensified pressure on water resources, making efficient monitoring and management essential. Furthermore, climate change-driven events like floods, droughts, and contamination outbreaks highlight the need for predictive water analytics. Governments and municipalities are investing heavily in digital water solutions as part of smart city projects, while industries demand tools for better asset management and operational efficiency. The integration of AI, machine learning, and IoT technologies into cloud platforms further enhances their value proposition by enabling predictive maintenance, leakage detection, and real-time alerts.

The future growth of the global cloud-based water analytics market will be propelled by advancements in cloud computing, the proliferation of smart devices, and the increasing adoption of Monitoring-as-a-Service (MaaS) business models. As subscription-based models reduce upfront costs, even small utilities and emerging economies can access advanced water analytics tools. Partnerships between technology providers, water utilities, and governments are fostering innovation and expanding market reach. With Asia Pacific emerging as a high-growth region due to its rapid urbanization and water management challenges, the market is poised for sustained growth globally. Overall, the demand for efficient, intelligent, and compliant water management systems will drive the adoption of cloud-based analytics in the years ahead.

Key Market Drivers

Rising Global Water Scarcity and Demand for Efficient Resource Management

The increasing scarcity of freshwater resources is compelling governments, industries, and utilities worldwide to seek advanced solutions for monitoring and managing water usage. Population growth, rapid urbanization, and climate change have collectively stressed global water supplies. Cloud-based water analytics platforms allow organizations to track consumption patterns, detect inefficiencies, and optimize distribution systems in real time. These platforms support sustainable water management by enabling data-driven decisions, predictive maintenance, and leakage detection-functions critical to minimizing wastage and ensuring equitable distribution.

For instance, agriculture accounts for approximately 70% of global freshwater withdrawals according to the Food and Agriculture Organization (FAO). Cloud-based analytics help optimize irrigation systems by analyzing water needs based on soil moisture data, weather forecasts, and historical usage patterns. Similarly, urban utilities leverage real-time analytics to identify leakages-responsible for up to 30% of water loss in distribution networks-and take timely corrective action. By integrating cloud platforms with IoT-enabled sensors, utilities and industrial users gain actionable insights, which support both operational efficiency and environmental sustainability. By 2025, an estimated 1.8 billion people will live in regions suffering from absolute water scarcity, as reported by the United Nations. This projection emphasizes the urgent global need for advanced water management solutions like cloud-based analytics, which help optimize usage, detect leakages, and improve overall water resource sustainability in increasingly strained environments.

Key Market Challenges

Integration with Legacy Infrastructure and Existing Water Management Systems

One of the most significant challenges facing the global cloud-based water analytics market is the complexity involved in integrating modern analytics platforms with existing, often outdated, water management infrastructure. Water utilities and industrial operators in many regions, particularly in emerging economies, have traditionally relied on legacy systems characterized by manual operations, analog instrumentation, and siloed data environments. These legacy infrastructures were never designed with digital transformation in mind, making it difficult to seamlessly implement cloud-based analytics solutions. The process of retrofitting old systems with advanced sensors, real-time data acquisition tools, and cloud gateways requires both significant capital investment and specialized technical expertise. Furthermore, legacy infrastructure may lack the necessary digital interfaces or compatibility standards, resulting in extended project timelines, unexpected costs, and operational disruptions during the transition phase.

The challenge of integration is compounded by the diversity of water management systems across regions and industries. Different utilities may operate varying types of hardware, communication protocols, and software systems, creating fragmented environments that resist standardized cloud deployment. This heterogeneity necessitates customized integration strategies for each deployment, further driving up implementation complexity and cost. Moreover, water management is often critical infrastructure, and utilities are understandably cautious about adopting technologies that may compromise operational reliability or data integrity. Ensuring continuous service delivery while upgrading systems remains a delicate balance for operators.

Cloud-based solutions must offer robust interoperability, secure data migration capabilities, and minimal downtime assurances to gain acceptance within such environments. Until these integration hurdles are systematically addressed, especially for small to medium-sized utilities with limited budgets, the growth potential of cloud-based water analytics will remain partially constrained.

Key Market Trends

Adoption of Artificial Intelligence and Machine Learning in Water Analytics

The increasing integration of artificial intelligence and machine learning into cloud-based water analytics platforms is transforming the way water resources are monitored, managed, and optimized. Artificial intelligence-driven solutions enable predictive analysis, anomaly detection, and automated decision-making, which enhance operational efficiency and reduce water loss. These advanced technologies process large volumes of real-time data collected from various sources, including sensors, smart meters, and satellite imagery, to provide actionable insights. Predictive maintenance models based on artificial intelligence help utilities anticipate equipment failures, pipeline leaks, or contamination events, minimizing service disruptions and maintenance costs. Machine learning algorithms continuously improve the accuracy of water demand forecasting, leakage detection, and consumption pattern analysis by learning from historical and real-time data. This ability allows water utilities, municipalities, and industrial operators to make data-driven decisions and proactively manage water distribution networks. The integration of artificial intelligence into cloud platforms also supports dynamic optimization of water usage in agriculture, industrial processes, and smart city applications. As these technologies mature and become more accessible through cloud services, the adoption of artificial intelligence and machine learning in water analytics is expected to increase steadily, providing enhanced predictive capabilities and operational intelligence for users across diverse sectors.

Key Market Players

- ABB Ltd.
- General Electric Company
- IBM Corporation
- Microsoft Corporation
- Schneider Electric SE
- Siemens AG
- Oracle Corporation
- Suez SA

Report Scope:

In this report, the Global Cloud-based Water Analytics Market has been segmented into the following categories, in addition to the industry trends which have also been detailed below:

- Cloud-based Water Analytics Market, By Component:
  - Solutions
  - Services
- Cloud-based Water Analytics Market, By Deployment Mode:
  - Public Cloud
  - Private Cloud
  - Hybrid Cloud
- Cloud-based Water Analytics Market, By Application:
  - Water Quality Monitoring
  - Leakage Detection & Management
  - Asset Management
  - Demand Forecasting & Consumption Analytics
  - Flood Monitoring & Disaster Management
  - Regulatory Compliance & Reporting
  - Wastewater Treatment Analytics
- Cloud-based Water Analytics Market, By Region:
  - North America

- United States
- Canada
- Mexico

o Europe

- Germany
- France
- United Kingdom
- Italy
- Spain

o Asia Pacific

- China
- India
- Japan
- South Korea
- Australia

o Middle East & Africa

- Saudi Arabia
- UAE
- South Africa

o South America

- Brazil
- Colombia
- Argentina

Competitive Landscape

Company Profiles: Detailed analysis of the major companies present in the Global Cloud-based Water Analytics Market.

Available Customizations:

Global Cloud-based Water Analytics Market report with the given market data, TechSci Research offers customizations according to a company's specific needs. The following customization options are available for the report:

Company Information

Detailed analysis and profiling of additional market players (up to five).

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