Active Network Management - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

Market Report | 2024-02-17 | 100 pages | Mordor Intelligence

AVAILABLE LICENSES:

- Single User License $4750.00
- Team License (1-7 Users) $5250.00
- Site License $6500.00
- Corporate License $8750.00

Report description:

The Active Network Management Market size is estimated at USD 1.39 billion in 2024, and is expected to reach USD 2.97 billion by 2029, growing at a CAGR of 16.48% during the forecast period (2024-2029).

Key Highlights
-Utilities are increasingly transitioning to cloud-based solutions for active network management market and grid asset monitoring due to the scalability, remote accessibility, and cost-efficient data storage and processing capabilities. Furthermore, utilities use artificial intelligence (AI) and data analytics to optimize grid operations. Active network management systems leverage predictive analytics to anticipate grid behavior and implement proactive measures. Grid asset monitoring also utilizes AI to predict maintenance needs and detect anomalies, thus contributing to the market's growth.
-The emerging Smart Grid technology will facilitate the shift to a low-carbon economy, and ANM systems will be required for power flow and voltage management. Huge investments need to be made toward electricity grids; around USD 600 billion in annual investment is required to achieve a net zero target by 2030. However, the investment process can be fast in emerging markets and developing economies, so electricity grids need to receive this necessary recognition and restrain the growth of the ANM market.
-According to the International Energy Agency (IEA), global electricity generation will rise by 2,493TWh between 2022 and 2025, leading to the growth in renewable generation that will cater to this demand. While Germany aims for 100% power generation from renewable resources by 2035, renewables are expected to be the most significant source of electricity within the next three years globally. Active network management systems will play a vital role in linking more distributed, renewable generation.
-The electrification of transportation, electric vehicles (EVs), necessitates active network management for the management of the charging infrastructure, as well as grid asset monitoring to evaluate the effect on grid assets. This step has been a driving factor in the expansion of the market. According to the Confederation of Indian Industry (CII), in July 2023, India may require at least

1.32 million EV charging stations by 2030 to facilitate the rapid uptake of electric vehicles. The government's strong support for electric vehicles has increased consumer choice and awareness, resulting in an exponential growth in EV adoption during 2022, with a threefold increase from the previous year.
-Active network management (ANM) systems collect and transfer sensitive information about network operations. It is essential to ensure the confidentiality and safety of this data. Rising concerns of data breaches or misappropriation may impede the adoption of Active network management (ANM) systems. Furthermore, in certain regions with rugged terrain or extreme weather conditions, implementing an Active network management infrastructure may be challenging and expensive, thus impeding the market's growth.
-Active network management (ANM) projects faced delays in the primary stages of the COVID-19 pandemic due to supply chain disruptions, labor constraints, and restrictions on-site visits and installation. These factors affected both ongoing and new projects. Subsequently, the COVID-19 pandemic highlighted the need for grid resilience, and the role of active network management in monitoring and responding to grid disruptions has become increasingly important in providing a dependable power supply, particularly during unexpected outages.

Active Network Management Market Trends

Grid Asset Monitoring to Hold the Significant Market Share

- The smart grids are experiencing a surge in demand due to increasing environmental concerns. Over the years, energy consumption has grown significantly, and approximately USD 25 billion was allocated to energy storage and smart grids worldwide between January 2022 and September 2022. These investments are expected to expand, with energy storage companies playing a pivotal role in transitioning from fossil fuels to clean energy sources.
- Due to increasing electricity demand, grids receive more renewable energy sources input than they were designed for. Transformer monitoring is essential since broken or old transformers account for more than 70% of downtime and service costs. Asset performance management (APM) and active network management (ANM) are essential tools to effect this change.
- According to The US Department of Energy (DoE), total capital spending on IT and OT digital technologies by US electric utilities will reach 24.5 billion USD by 2026. Of this, 16.4 billion USD will be used for smart grid technologies and systems.
- It is becoming increasingly important for many regions to invest in grid modernization initiatives to enhance the electrical networks' dependability, productivity, and resilience. In April 2023, India's state of Bihar had the most installed smart meters across the country, with a total of 1.37 million. Uttar Pradesh followed in second place, followed by Haryana. Asset monitoring is a crucial component of this process, as it is essential for managing and optimizing these modernized networks. For instance, in the Asia Pacific, countries like the Chinese State Grid announced in January 2023 a USD 77 billion investment in the power grid for the year 2023.
- Companies like Ubicquia are developing AI-based solutions to help utility companies maintain their substations with remote monitoring. The UbiHub substation monitoring solution uses cutting-edge camera technology with industrial AI to detect safety risks like arc flashes, watch for wildlife intrusions, and spot trespassing criminals. This way, utilities have complete insight into every substation and can actively monitor threats.

Asia-Pacific to Witness a Significant Growth

- Asian nations want to electrify quickly across all industries. Green community grids are gaining significant traction, notably in nations like China, India, and Nepal. According to the International Energy Agency (IEA), 70% of global electricity demand growth will come from Asian countries, comprising China, India, and Southeast Asia. China will account for over 45% of renewables

growth in the next two years.
- The emergence of smart cities is expected to add to the region's competencies in the market. With the help of technology, smart cities can lessen their adverse environmental effects. For instance, smart power systems can manage peak demand. Smart water systems can ensure efficient water distribution and evidence-based decision-making tools can be used to plan limited infrastructure investments more efficiently and transparently. One of the essential elements of any functioning smart city is a smart energy system. Advanced technologies like the Internet of Things (IoT), artificial intelligence (AI), and big data are expected to address various current and future difficulties.
- Implementing IoT devices and sensors has been a significant contributor to the expansion of the active network management industry. These technologies enable real-time monitoring of grid conditions and the performance of assets, allowing for faster responses to problems and more informed decisions. For instance, in September 2023, India's power infrastructure system is undergoing a significant transformation, as the integration of smart grids and the IoT has enabled a revolutionary combination of efficiency and reliability in power distribution, as well as the development of a more resilient and sustainable energy system.
- Energy sector players are investing in AI technologies. For instance, smart electric vehicle (EV) chargers can automatically enable charging when demand is lowest and electricity cheapest, thus reducing the burden on the network. India-based ReNew Power announced a collaboration with twelve foreign lenders for external commercial borrowings for project finance loans of 1.1 billion USD. The funds will be utilized for ReNew's hybrid, battery-powered, round-the-clock renewable energy project, including solar projects, wind farms, and battery storage facilities.

Active Network Management Industry Overview

The active network management market is highly competitive due to the presence of numerous small and large players. Major organizations are actively working towards reducing greenhouse gas emissions to nearly zero or achieving Net Zero emissions within a specific timeframe. This imperative has driven the demand for Active Network Management solutions. Key industry players such as Siemens AG, General Electric Company, and Argand Solutions are at the forefront of developing innovative solutions to monitor real-time issues stemming from high distributed generation (DG) penetration, consequently increasing DG capacity within distribution networks.

In February 2023, Siemens entered into a strategic partnership with EnergyHub to create a holistic and scalable next-generation DER management system (Distributed Energy Resources). Siemens' software will play a pivotal role in enhancing the planning, operation, and maintenance of networks by considering all the distributed energy sources. This collaboration between Siemens and EnergyHub empowers utilities to leverage Siemens' network expertise and EnergyHub's grid-leading capabilities, resulting in a comprehensive portfolio element for a next-generation distributed energy resource management solution. This development is poised to enable utilities to achieve net zero emissions by harnessing distributed energy resources as a non-wiring alternative solution, reducing the need for investments in hardware.

In January 2023, Expeto, Inc. joined forces with Portland General Electric (PGE), a prominent provider of public and private mobile networks, to accelerate the grid modernization process and the integration of renewable energy sources. Expeto's private wireless network, facilitated by Portland General Electric, will streamline automated grid resilience, track field conditions through intelligent sensors and equipment, integrate workers for enhanced employee safety, and provide electric vehicle charging stations for public grid use. This collaborative effort is set to advance the adoption of renewable energy and modernize the grid infrastructure.

Additional Benefits:

- The market estimate (ME) sheet in Excel format
- 3 months of analyst support

Table of Contents:

Active Network Management - Market Share Analysis, Industry Trends & Statistics, Growth Forecasts 2019 - 2029

Market Report | 2024-02-17 | 100 pages | Mordor Intelligence

To place an Order with Scotts International:

- - Print this form
- - Complete the relevant blank fields and sign
- - Send as a scanned email to support@scotts-international.com

ORDER FORM:

Select license	License	Price
	Single User License	$4750.00
	Team License (1-7 Users)	$5250.00
	Site License	$6500.00
	Corporate License	$8750.00
	VAT	
	Total	

*Please circle the relevant license option. For any questions please contact support@scotts-international.com or 0048 603 394 346.

** VAT will be added at 23% for Polish based companies, individuals and EU based companies who are unable to provide a valid EU Vat Numbers.

Email*		Phone*	
First Name*		Last Name*	
Job title*			
Company Name*		EU Vat / Tax ID / NIP number*	
Address*		City*	
Zip Code*		Country*	
		Date	2025-05-04
		Signature