# Article information:

Fog Computing: A Comprehensive Architectural Survey | IEEE Journals & Magazine | IEEE Xplore  
<https://ieeexplore.ieee.org/abstract/document/9046806>

# Article summary:

1. Fog computing is an emerging technology that addresses computing and networking bottlenecks in large-scale deployment of IoT applications by deploying computational, networking, storage, and acceleration elements at the edge and network layers in a multi-tier, distributed, and possibly cooperative manner.

2. Fog computing provides a framework for task segmentation, placement, offloading, and execution in a distributed and collaborative environment where devices communicate and potentially cooperate to perform storage and processing tasks that can be done with or without coordination with centralized cloud applications.

3. The article proposes a comprehensive taxonomy for architectural, algorithmic, and technologic aspects of fog computing and covers practical deployment aspects such as system design, application design, software implementation, security, computing resource management, and networking from an architectural point of view.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article "Fog Computing: A Comprehensive Architectural Survey" provides a detailed overview of the emerging technology of fog computing and its potential applications in addressing computing and networking bottlenecks in large-scale deployment of IoT applications. The article presents a comprehensive taxonomy for architectural, algorithmic, and technological aspects of fog computing, covering various dimensions such as system design, application design, software implementation, security, computing resource management, and networking.

One potential bias in the article is that it focuses primarily on the benefits and potential applications of fog computing without adequately exploring its limitations or drawbacks. While the article briefly mentions some challenges related to fog computing such as security concerns and resource management issues, it does not provide a thorough analysis of these challenges or explore potential solutions to address them.

Another limitation of the article is that it primarily focuses on the architectural aspects of fog computing and does not delve into the underlying algorithms or enabling technologies in detail. While this approach may be useful for providing an overview of the current state-of-the-art literature on fog computing from an architectural perspective, it may not provide sufficient insights into the technical details required for implementing fog computing systems.

Additionally, while the article provides a comprehensive survey of existing reference architectures and major application-specific architectures describing their salient features and distinctions in the context of fog computing, it does not explore alternative approaches or counterarguments to these architectures. This one-sided reporting may limit readers' understanding of different perspectives on how best to implement fog computing systems.

Overall, while "Fog Computing: A Comprehensive Architectural Survey" provides a useful overview of the emerging technology of fog computing from an architectural perspective, readers should be aware that it primarily focuses on its benefits rather than limitations or drawbacks. Additionally, readers should seek out additional sources to gain a more nuanced understanding of both sides of debates related to implementing fog computing systems.

# Topics for further research:

* Limitations and drawbacks of fog computing
* Fog computing algorithms and enabling technologies
* Security concerns in fog computing
* Resource management issues in fog computing
* Alternative approaches to fog computing architectures
* Counterarguments to fog computing reference architectures

# Report location:

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