

## عنوان مقاله:

Embedding Virtual Machines in Cloud Computing based on Big Bang–Big Crunch Algorithm

## محل انتشار:

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## خلاصه مقاله:

Cloud computing is becoming an important and adoptable technology for many of the organization which requires a large amount of physical tools. In this technology, services are provided and presented according to users' requests. Due to the presence of a large number of data centers in cloud computing, power consumption has recently become an important issue. However, data centers hosting Cloud applications consume huge amounts of electrical energy and contributing to high operational costs to the environment. Therefore, we need Green Cloud computing solutions that can not only minimize operational costs but also reduce the environmental impact. Live migration of virtual machines and their scheduling and embedding lead to enhanced efficiency of dynamic resources. The guarantee of service quality and service reliability is an indispensable and irrevocable requirement with respect to service level agreement. Hence, providing a method for reducing costs of power consumption, data transmission, bandwidth and, also, for enhancing quality of service (QoS) in cloud computing is critical. In this paper, a Big Bang–Big Crunch (BB-BC) based algorithm for embedding virtual machines in cloud computing was proposed. We have validated our approach by conducting a performance evaluation study using the CloudSim toolkit. Simulation results indicate that the proposed method not only enhances service quality, thanks to the reduction of agreement violation, but also .reduces power consumption

## کلمات کلیدی:

Cloud computing; Virtual machine; Big Bang–Big Crunch algorithm; Energy; Service level agreement

## لینک ثابت مقاله در پایگاه سیویلیکا:

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