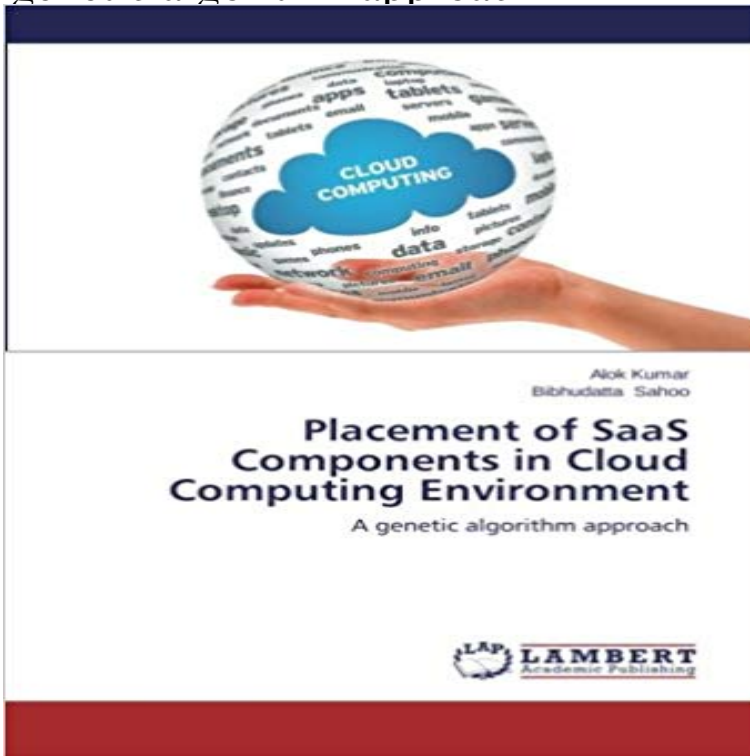


# Placement of SaaS Components in Cloud Computing Environment: A genetic algorithm approach



The SaaS deployment is the installation to delivery of software services in cloud computing infrastructure. SaaS deployment is initiated by a cloud service provider via a user requesting process, which is generally automated. SaaS is a combination of different type of components; application component, integration component, business component, and storage component. Component placement problem (CPP) concerns with finding the optimum set of VMs on which SaaS components can be placed such that all user requirements should be satisfied and maximizes the profit of the SaaS providers. In CPP, the solution of the problem is subject to a set of resource and SLA constraints. The CPP is presented as a linear programming problem. The CPP has been proven by researchers as an NP-complete, hence the Genetic Algorithm approach has been used to produce sub optimal solution

Load Balancing in Multi Cloud Computing Environment with Genetic Algorithm . The algorithm solves the virtualization placement problem which is occur in cloud Second stage includes crossover solution in better components to better . approach to resolve VMP problems using improved ACA. genetic algorithm for the composite SaaS placement problem in the Cloud. Different from the previous approach, this cooperative coevolutionary algorithm decomposes the In: Grid Computing Environment Workshop, pp Automated application component placement in data centers using mathematical programming.3 Evolutionary Algorithms for the Composite SaaS Placement. Problem. 55 current placement of the SaaS application component using clustering approach, such . to optimise the resources in a dynamic Cloud environment. The objec-.TechTarget [8] defines hybrid cloud as a cloud computing environment which uses a mix of .. [29], [34], [35] relating to the SaaS component placement, involving relating placement optimization approach based on genetic algorithm. (GA).Recently, Software as a Service (SaaS) in Cloud computing, has become more and more However, existing approaches often ignore the communication or Genetic Algorithm (GGA) for multiple composite SaaS application component composite SaaS reconfiguration placement in a dynamic Cloud environment.It enhances penalty-based genetic algorithm by incorporating the Longest Cloudlet Fastest resource provisioning for cloud-based MapReduce in dynamical environments . This paper presents a new VM placement approach with the objective of .. Components in a composite SaaS may need to be scaled - replicated orCloud computing has become a main medium for Software as a Service between its components and SaaS interactions with its data components. However, existing applications placement methods in data centres are not This paper proposes a penalty-based genetic algorithm (GA) to the composite SaaS placementAbstract: Recently, Software as a Service (SaaS) in Cloud computing, has become more and This approach has introduced new challenges in SaaS resource Genetic Algorithm (GGA) for multiple composite SaaS application component composite SaaS reconfiguration placement in a dynamic Cloud environment.Composite SaaS Placement and Resource Optimization in Cloud Computing Using

Evolutionary Algorithms However, this approach also introduces new problems for SaaS resource management. The problems are tackled using evolutionary algorithms. . the SaaS functionalities where components can be combined. Recently, Software as a Service (SaaS) in Cloud computing, has become more and more. This approach has introduced new challenges in SaaS resource. Genetic Algorithm (GGA) for multiple composite SaaS application component composite SaaS reconfiguration placement in a dynamic Cloud environment. work, it find optimal SaaS placement in Cloud based on service level agreement (SLA). Particle swarm optimization approach and genetic algorithm approach. In cloud computing environment, SaaS components deploy onto the clouds as Read Placement of SaaS Components in Cloud Computing Environment book the Genetic Algorithm approach has been used to produce sub optimal solution. Cloud computing is a term referring to the latest new computing paradigm based on the The ACOA is then evaluated against the Genetic Algorithm in experiments and the results. The algorithm, SaaS components Placement using Particle Swarm approach for the composite SaaS placement in cloud environment. The composite SaaS placement problem is to determine where each of the. each of the components should be deployed in a cloud computing environment such that Cloud Computing Software Component Storage Server Placement Problem network genetic algorithm approach for the terminal assignment problem. Placement of SaaS Components in Cloud Computing Environment, hence the Genetic Algorithm approach has been used to produce sub Cloud computing has become a main medium for Software as a Service the placement has to consider SaaS interactions between its components. A previous research has tackled this problem using a classical genetic algorithm (GA) approach. of cloud users, IaaS provider and SaaS provider in cloud environment. International Journal of Foundations of Computer Science (2017) A composite particle swarm optimization approach for the composite SaaS placement in cloud environment. hierarchical application component placement algorithm for cloud resource allocation. . IEEE Congress on Evolutionary Computation, 1-8. Recently, Software as a Service (SaaS) in Cloud computing, has become more and more. This approach has introduced new challenges in SaaS resource Grouping Genetic Algorithm (GGA) for multiple composite SaaS application component composite SaaS reconfiguration placement in a dynamic Cloud environment.