(12) PATENT APPLICATION PUBLICATION

(19) INDIA

(22) Date of filing of Application :17/12/2020

(21) Application No.202041054869 A

(43) Publication Date : 25/12/2020

(54) Title of the invention : Enhanced power utilization and virtualization in cloud Datacenter through Cluster-MG algorithm

(51) International classification :H04L41/083 (31) Priority Document No :NA (32) Priority Date :NA (33) Name of priority country :NA (86) International Application No :PCT// Filing Date :01/01/1900 (87) International Publication No : NA (61) Patent of Addition to Application Number :NA Filing Date :NA (62) Divisional to Application Number :NA Filing Date :NA	(71)Name of Applicant : 1)Dr.S.Sugumaran. Address of Applicant :Professor, ECE Department Vishnu Institute of Technology, West Godavari District, Andhra Pradesh, Bhimavaram, , 534202 Andhra Pradesh India 2)Dr. V. Brindha Devi 3)Dr.S.Sivaprakash 4)Mr.P.Suthahar 5)S.Hemalatha, 6)Dr.T.Kavitha (72)Name of Inventor : 1)Dr.S.Sugumaran. 2)Dr. V. Brindha Devi 3)Dr.S.Sivaprakash 4)Mr.P.Suthahar 5)S.Hemalatha, 6)Dr.T.Kavitha

(57) Abstract :
The Cloud technology widely includes remote entities as resource and use computing power to bring the computational at a very fast and accurate rate. The computational efficiency of cloud is much appreciated for its Infrastructure as a service (IaaS). The cloud IaaS use resources based on its availability and its computational variables. Cloud computing follows an elastic on-demand provisioning and De-provisioning of resources. The resources are utilized and de-commissioned based on its SLAs (Service Level Agreement). The large-scale datacenter consume huge electrical energy which may cause huge environmental cost and economic impact. The proposed invention works on virtualization through resource management. The resources are clustered and dynamically consolidated to consider the efficiency of computation, which then improvised by Micro-Genetic algorithm. The cloud computing chosen for its benefits of economic and ecological massive datacenters for Industry and reduces operation and maintenance cost of IT infrastructures thus reducing greenhouse gas emissions.

No. of Pages : 9 No. of Claims : 6

inPASS — Indian Patent Advanced Search System   (http://ipindia.nic.in/index.htm)

INTELLECTUAL PROPERTY INDIA — PATENTS | DESIGNS | TRADE MARKS GEOGRAPHICAL INDICATIONS   (http://ipindia.nic.in/ind...

Patent Search

Invention Title	Enhanced power utilization and virtualization in cloud Datacenter through Cluster-MG algorithm
Publication Number	52/2020
Publication Date	25/12/2020
Publication Type	INA
Application Number	202041054869
Application Filing Date	17/12/2020
Priority Number	
Priority Country	
Priority Date	
Field Of Invention	COMMUNICATION
Classification (IPC)	H04L41/083

Inventor

Name	Address	Country	Nat
Dr.S.Sugumaran.	Professor, ECE Department Vishnu Institute of Technology, West Godavari District, Andhra Pradesh, Bhimavaram, , 534202	India	Indi
Dr. V. Brindha Devi	Associate Professor & HoD Department of Information Technology Sri Sai Ram Institute of Technology Sai Leo Nagar, West Tambaram, Chennai -600044.	India	Indi
Dr.S.Sivaprakash	Professor Department of Information technology CMR Engineering College Hyderabad 501401	India	Indi
Mr.P.Suthahar	Assistant Professor, Department of Information Technology Sri Sai Ram Institute of Technology Sai Leo Nagar, West Tambaram, Chennai -600044	India	Indi
S.Hemalatha,	Assistant Professor(Sr.gr), Department of Computer Applications Kongu Engineering College, Perundurai, Erode-638060	India	Indi
Dr.T.Kavitha	Assistant Professor (Sr.gr), Department of Computer Applications Kongu Engineering College, Perundurai, Erode-638060	India	Indi

Applicant

Name	Address	Country	Nat
Dr.S.Sugumaran.	Professor, ECE Department Vishnu Institute of Technology, West Godavari District, Andhra Pradesh, Bhimavaram, , 534202	India	Indi
Dr. V. Brindha Devi	Associate Professor & HoD Department of Information Technology Sri Sai Ram Institute of Technology Sai Leo Nagar, West Tambaram, Chennai -600044.	India	Indi
Dr.S.Sivaprakash	Professor Department of Information technology CMR Engineering College Hyderabad 501401	India	Indi
Mr.P.Suthahar	Assistant Professor, Department of Information Technology Sri Sai Ram Institute of Technology Sai Leo Nagar, West Tambaram, Chennai -600044	India	Indi
S.Hemalatha,	Assistant Professor(Sr.gr), Department of Computer Applications Kongu Engineering College, Perundurai, Erode-638060	India	Indi
Dr.T.Kavitha	Assistant Professor (Sr.gr), Department of Computer Applications Kongu Engineering College, Perundurai, Erode-638060	India	Indi

Abstract:

The Cloud technology widely includes remote entities as resource and use computing power to bring the computational at a very fast and accurate rate. The computationa efficiency of cloud is much appreciated for its Infrastructure as a service (IaaS). The cloud IaaS use resources based on its availability and its computational variables. Clou computing follows an elastic on-demand provisioning and De-provisioning of resources. The resources are utilized and de-commissioned based on its SLAs (Service Level Agreement). The large-scale datacenter consume huge electrical energy which may cause huge environmental cost and economic impact. The proposed invention works o virtualization through resource management. The resources are clustered and dynamically consolidated to consider the efficiency of computation, which then improvised Micro-Genetic algorithm. The cloud computing chosen for its benefits of economic and ecological massive datacenters for Industry and reduces operation and maintenan of IT infrastructures thus reducing greenhouse gas emissions.

Complete Specification

Claims:
1. The cloud computing is opted for its best performance in computing and resource handling.
a. The servers or the datacenters process large data under less computation hours and the accuracy of computation is also efficient.
b. The servers require large amount of power supply to efficiently handle the processing.
c. The server consolidation is done to improve the efficiency of the computation by reducing operational cost during server utilization.

2. The cluster micro-genetic algorithm helps virtualization and efficient task scheduling among the host of network and devices.
a. The clustering mechanism helps to group the available devices and its computing capacity based on its localization and time of access.
b. The micro-genetic algorithm implements virtualization by allocating the computational task to the remote servers and arraying the process upon its completion.
c. The task allocation makes the server be used when idle and avoids overloading when allocating task.

3. The server overloading during virtualization is better managed through the cluster micro-genetic algorithm.
a. The SLA shared with the server for virtualization are strictly followed during virtualization to avoid overloading the server.
b. The SLA shared includes the terms of use of virtual machine for utilizing the resource.
c. The task when allocated beyond the computational task would make the virtual machine to end the process incomplete.

<div style="text-align:center;">

[View Application Status]

</div>

Department of Industrial Policy and Promotion
Government of India