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### 1.3.3 Percentage of students undertaking project work/field work/ internships (Data for the latest completed academic year)

Dept: M.E -CSE

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GUNDUR, TIRUCHIRAPPALLI-620 007.

**RESOURCE SCHEDULING POLICY USING FIREFLY  
ALGORITHM IN CLOUD COMPUTING**

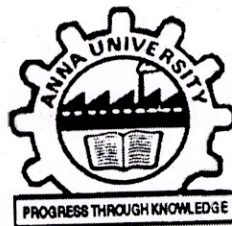
**A THESIS**

*Submitted by*

**S.SEETHALAKSHMI (812418405001)**

*in partial fulfillment for the award of the degree of*

**MASTER OF ENGINEERING  
IN  
COMPUTER SCIENCE AND ENGINEERING**



**M.I.E.T ENGINEERING COLLEGE  
TIRUCHIRAPPALLI 620 007**

**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING**

**ANNA UNIVERSITY, CHENNAI 600 025**

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# ANNA UNIVERSITY, CHENNAI

## BONAFIDE CERTIFICATE

Certified that this Thesis titled “**RESOURCE SCHEDULING POLICY USING FIREFLY ALGORITHM IN CLOUD COMPUTING**” is the bonafied work of “**S.SEETHALAKSHMI (Registration Number: 812418405001)**” who carried out the work under my supervision. Certified further that to the best of my knowledge the work reported here in does not form part of any other thesis or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

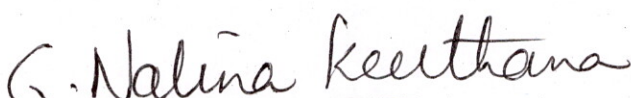
  
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INTERNAL EXAMINER

  
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EXTERNAL EXAMINER

## ABSTRACT

The cloud service providers require a large number of computing resources to provide services on-demand. A cloud system must optimally use its resources to achieve a low operational cost without degrading the quality of services. Virtual Machine (VM) scheduling is a key building block of a successful cloud datacenter. Efficient utilization of computing cluster matters for enterprises. A good scheduling policy packs work tightly to reduce fragmentation and increase the throughput. Resource management is a difficult online decision-making problem where appropriate solutions rely on understanding workloads and environments. Inappropriate scheduling leads to problems such as under utilization or over utilization. We are proposing an effective VM scheduling policy using firefly algorithm to provide effective provisioning and to reduce over and under utilization of resources. Through the simulation platform Cloudsim, it is found that under the cloud computing model, the algorithm presented in this paper can effectively reduce the average time spent by subtasks in processing request tasks, and thus improve the efficiency of task processing and achieve a rational allocation of resources.

  
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## CHAPTER 5

### SUMMARY AND CONCLUSION

#### 5.1 SUMMARY

This paper focuses on presentation of design, implementation, and evaluation of a resource management system for cloud computing services. Our system multiplexes virtual to physical resources adaptively based on the changing demand. We use the firefly metric to combine VMs with different resource characteristics appropriately so that the capacities of servers are well utilized. Our algorithm achieves both overload and under load avoidance.

#### 5.2 CONCLUSION

In order to reduce running cost of cloud computing system, according to the characteristics of the virtual machine resource scheduling, we propose virtual machine resources scheduling optimal method based on firefly algorithm, which can give the optimal time span and resources to the virtual resource scheduling objective function. The results show that the firefly algorithm can obtain the ideal resource scheduling scheme, load security resources in a state of equilibrium, which is more suitable for large scale cloud computing resource scheduling.

  
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