SUMMARY OF THE THESIS

This thesis is organized into three phases

1. Load balancing
2. Reliable VM identification.
3. Resource Optimization

Phase 1: The load balancing is used to load the resource efficiently by using the present resource level scheduling method.

Phase 2: The server identifies the failure VM by using the reliability method. The present method uses reliability in two ways, one by identifying the failure VM and the other by identifying the reliable VM after the data is loaded in the VM.

Phase 3: The phase 3 gives the comparative analysis of phase 1 and phase 2. Phase three links phase 1 and phase 2 and produces the result as resource optimization. In both phases, the resource such as memory is the most common parameter.

The aim of this work is to increase the efficiency of the cloud. In phase 1, the memory is optimized efficiently and in phase 2 the optimized memory is taken to identify the reliable and failure VM. To achieve the goals, three algorithms have been proposed and the specific contribution is structured in the following three phases

**Phase I : Efficient Dynamic Fuzzy Resource Level Scheduling Algorithm (EDFRLS)**

- Reduce processing time and execution time
- Balance load
- Increase speed

**Phase II : Efficient Dynamic Resource Assessment Algorithm (EDRAP)**

- Reduce delay
- Increase speed
Identify reliable and failure VM

Phase III: Improved Efficient Dynamic Resource Optimization Algorithm (IEDRO)

- Reduce processing time
- Balance Load
- Increase speed
- Reduce delay
- Identify Reliable & Failure VM

The thesis is organized into the following chapters:

Chapter 1 explains the scheme of the thesis followed by the introduction of cloud computing, services, deployment in cloud, virtualization, characteristics, advantages, load balancing, reliability, and objective of the thesis.

Chapter 2 deals with the literature survey and general background study of load balancing and reliability algorithm in cloud computing.

Chapter 3 explains the present methodology in two different phases. It illustrates the existing load balancing and its limitations. Chapter 4 and Chapter 5 show the significance of each phase of the present approach for cloud computing.

Chapter 4 gives the details of the present algorithm “Efficient Dynamic Fuzzy Resource Level Scheduling”. It presents the performance and the comparison of the PISA and EDFRLS. It gives the efficient load balancing and improves the QoS.

Chapter 5 deals with the present algorithm “Efficient Dynamic Resource Assessment Procedure”. It presents the performance and a comparison of the RAP and EDRAP.

Chapter 6 deals with the “Improved Efficient Dynamic Resource Optimization” algorithm to further improvements of load balancing and reliability algorithms. This algorithm uses resource
optimization technique. It deals with the load balancing by the identification of failure and reliable VM.

Chapter 7 explains the conclusion and scope for future work.

The simulation of the result is performed in cloud simulator with 200 VM. The simulator achieves the efficient and the expected result in better manner.