

Service Time Distribution of Tasks Using Adapt – Policy

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ABSTRACT

Task assignment in server farms we propose an adaptive task assignment policy named as ADAPT-POLICY, which is based on the conception of many static-based task assignment policies ADAPT-POLICY defines a setoff policies for a given system taking into account the specific properties of the system. They have different execution characteristics under different workload conditions the objective is to use the task assignment policy with the best performance. Which task assignment policy performs the best depends on the traffic conditions that vary over time. ADAPT-POLICY determines the best task assignment using the service time distribution of tasks (and various other traffic properties), which is estimated and then it adaptively changes the task assignment policy to suit the most recent traffic conditions. The experimental results show that ADAPTPOLICY can result in significant performance improvements over both static and dynamic task assignment policies.

Keywords: Adaptive task assignment, locality aware task assignment policies, non-parametric density estimation, on-line density estimation, performance, optimisation

I. INTRODUCTION

Server farms have become very popular in recent years since they effectively address the problem of large delays, a common problem faced by many organisations whose systems receive high volumes of traffic. Due to these reasons server farms have been used extensively for web hosting and scientific computing. The performance of such server farms is directly associated with the underlying task assignment policy. Such a policy is based on the specific set of rules that define the way the incoming tasks are assigned to and processed at back-end hosts.

The primary objective is to optimize certain performance criteria (such as the expected waiting time, slowdown or flow-time) by efficiently assigning tasks to hosts. The service time distribution of tasks plays a crucial role when designing task assignment policies because it is directly related to their performance.

II. METHODS AND MATERIAL

A. Related Works

Server farms they successfully address the big thing interruptions a general difficulties faced by many organizations whose systems receive high volumes of

traffic. Due to these reasons server farms have been used extensively for web hosting and scientific computing.

There are three main reasons for this:

- 1) Service times of such tasks are not always recorded. As such, it is difficult to find a sufficient number of data sets.
- 2) Even if such data sets are available, they may not come from homogeneous family of distributions and any attempt to fit a particular distribution to it would be a difficult task.
- 3) There is also a possibility for the service time distribution of tasks to vary over time due to the non-stationary nature of traffic flow.

B. PROBLEM ANALYSIS

The objective is to use the policy with the greatest performance, i.e., the one with the smallest expected waiting time for assigning tasks. Which policy performs the best thing based on the traffic conditions that differ over time. ADAPT-POLICY determines the best task assignment (dynamically) using the service time distribution of tasks (and various other traffic properties);

it dynamically changes the task assignment policy to suit the most recent traffic conditions.

- a) Data collection: For each task that completes its processing, ADAPT-POLICY computes its service time by subtracting the departure time from the arrival time. It stores these processing times at individual hosts in their main memory or in a form of file. After the system completes processing n number of requests, the processing times stored at hosts are merged together for further analysis.
- b) Selection of task assignment policies: Different systems support different policies and for many such systems, it is possible to define a set task assignment policies that have different performance characteristics under different traffic conditions. The proposed policy makes no assumptions regarding the service time distribution of tasks or actual sizes of tasks .To choose correct path and sending the Information.

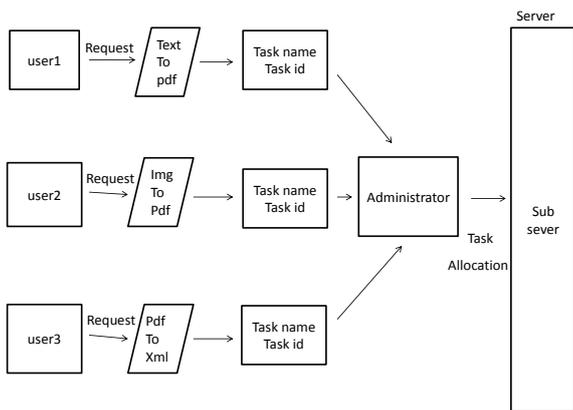


Figure 1 Architecture Diagram

III. RESULTS AND DISCUSSION

A. Database Creation

The mass storage creation is the administration process and what kind of the data are stored in mass device. Mass storage is collection of server creation. Details of user are stored in database what are the facilities available in the cloud will be designed and displayed in end user web page.

Database to record the details of each task like id, service time, and size of the task dynamically has to be created. Jobs for each server will be designed.

B. Task Allocation

List of task will be shown to user. The user has to select the task from the services which are displayed in the user window The current task size and id are stored automatically

C. Calculate Average Service Time

The computation of service time is done by subtracting the departure time from the arrival time. It is stored in the database processing times at individual hosts in their main memory or in a form of file. After the system completes the processing of “n” number of requests, the processing times stored at hosts are merged together for further analysis.

D. Task Selection

Selections of task assignment policies in which the task should be done by adapt policy or dynamically choosing which task should be done separately are decided by the user.

ADAPT-POLICY defines a set of static-based policies for a given distributed system based on its properties, and later uses the task assignment policy with the least expected waiting time for assigning the next batch of tasks.

The task assignment policy with the least expected waiting time is determined using the service time distribution and various distributional properties of service time distribution that are estimate the time.

E. Report Generation

At last the administrator is allocating the mission to the server. We already calculating the service time, mission arrival and departure time are stored in mission.

Task Assignment Based on Prioritizing Traffic Flows. In this process is to display the table format in what are the mission to be executed and currently what mission is running, all the contents to be displayed.

IV. CONCLUSION

This paper proposed a novel policy for assigning tasks in server farms. The proposed policy makes no assumptions regarding the underlying service time distribution of tasks or the actual sizes of tasks. ADAPT-POLICY defines a set of static-based policies for a given distributed system and it then utilises the task assignment policy with the least expected waiting time for assigning the next batch of tasks. Through extensive numerical experiments, we showed that ADAPT-POLICY outperforms

V. REFERENCES

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