

**CHENNAI – PONDICHERRY**

**Dynamic Deployment and Cost-Sensitive Provisioning for Elastic Mobile Cloud Service**

**Abstract:**

As mobile customers gradually occupying the largest share of cloud service users, the effective and cost-sensitive provisioning of mobile cloud services quickly becomes a main theme in cloud computing. The key issues involved are much more than just enabling mobile users to access remote cloud resources through wireless networks. The resource limited and intermittent disconnection problems of mobile environments have intrinsic conflict with the continuous connection assumption of the cloud service usage patterns. We advocate that seamless service provisioning in mobile cloud can only be achieved with full exploitation of all available resources around mobile users. An elastic framework is proposed to automatically and dynamically deploy cloud services on data center, base stations, client units, even peer devices. The best deployment location is dynamically determined based on a contextaware and cost-sensitive evaluation model. To facilitate easy adoption of the proposed framework, a service development model and associated semi-automatic tools are provided such that cloud service developers can easily convert a service for execution on different platforms without porting. Prototype implementation and evaluation on the Google Cloud and Android platforms demonstrate that our mechanism can successfully maintain seamless services with very low overhead.

**Existing System:**

Both industrial experts and academic scholars have proposed many possible solutions. Our goal is to develop effective technologies to enable mobile users anytime anywhere access to unlimited computing power and storage space offered by cloud services. However, the integration of the two technologies is far from straightforward. The CPU, memory, screen and other resources on mobile devices are relatively poor in comparison with their desktop counterparts. They are unlikely to be able to host all variety of cloud services smoothly. Another intrinsic characteristic of mobile networking is the intermittent disconnection and the need for disconnected operations.

This is clearly against the always-on requirement of cloud services. It is therefore necessary to develop highly flexible mobile cloud service architecture and service management technologies to dynamically partition and seamless integrate the services among cloud, base stations and mobile devices. Furthermore, the development of mobile cloud services in such environments is highly challenging. We propose an elastic framework and the associated application development model for effective application development and highly dynamic service provisioning in mobile cloud environments. Our framework supports the idea of enabling users seamless access to mobile cloud services by employing all available resources on all possible platforms including cloud data centers, base station servers, client devices, and even peer devices.

**Proposed System:**

Devise a mobile cloud service framework and optimization scheme to dynamically determine the most cost-efficient service configuration considering all possible platforms and resource combinations.

\_ The cost-efficiency is evaluated based on platform capability, service availability and transfer cost, input location, output destination, data size, network bandwidth, data transmission cost, service execution cost, and dynamic provisioning cost.

\_ Provide an efficient mechanism for the dynamic deployment of services and data, if necessary, to the selected locations of the configuration.

\_ Monitor the service execution continuously on the move and dynamically adapt the configuration if necessary to accommodate to changes.

\_ Provide a software model for the development of elastic mobile cloud services within our framework.

\_ Offer middleware and tools to support multiplatform service generation and deployment.

\_ Actual implementation and evaluation of our framework on Google Cloud and Android platforms.