CLOUD MANAGEMENT MECHANISMS

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CONTENTS

- Remote Administration System
- Resource Management System
- SLA Management System
- Billing Management System

INTRODUCTION

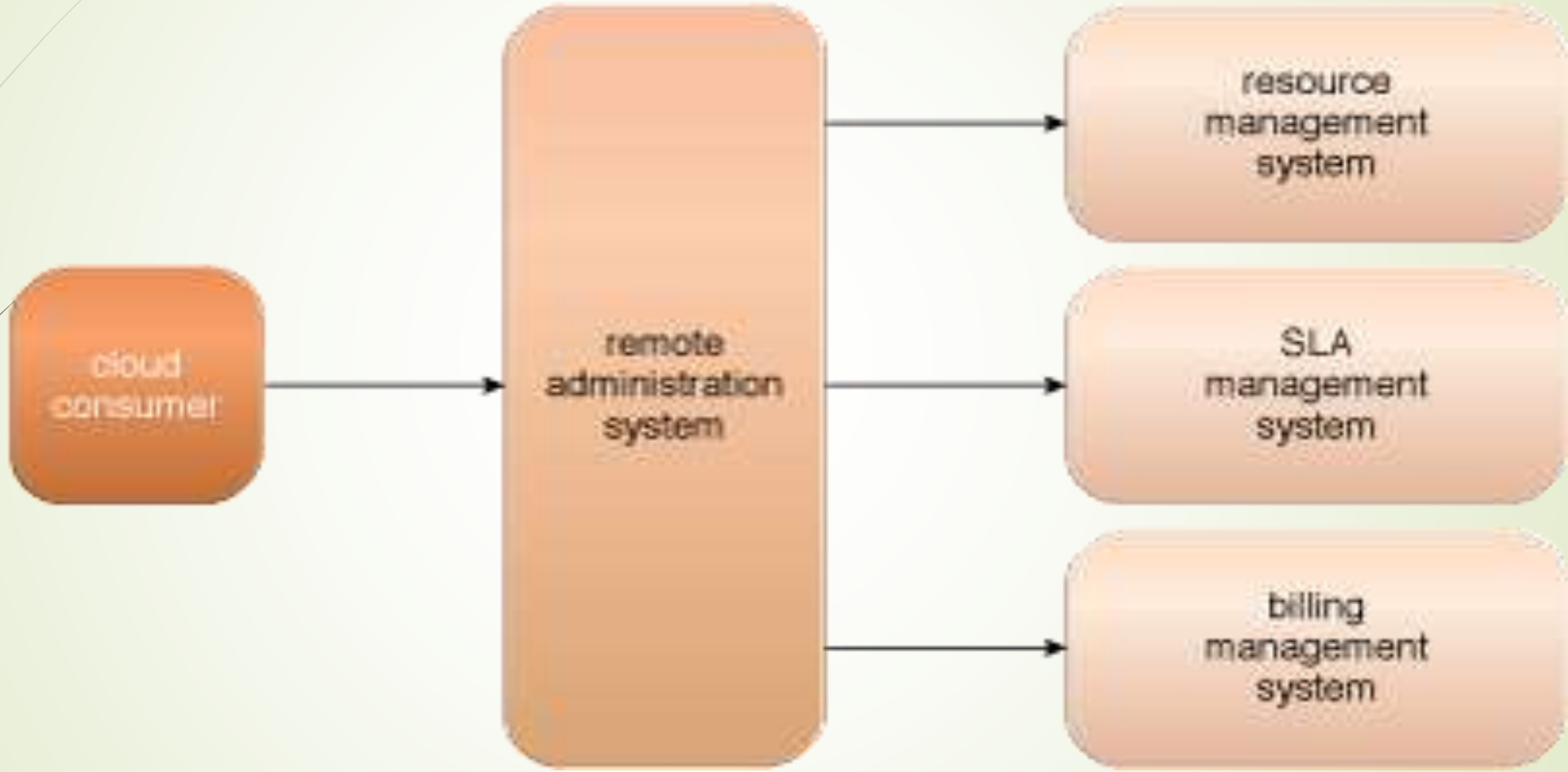
- Cloud management means the software and technologies designed for operating and monitoring applications, data and services residing in the cloud.
- Cloud management tools help ensure cloud computing-based resources are working optimally and properly interacting with users and other services.
- Cloud management typically involve numerous tasks including performance monitoring (response times, latency, up-time, etc.), security and compliance auditing and management, and initiating and overseeing disaster recovery and contingency plans.

REMOTE ADMINISTRATION SYSTEM

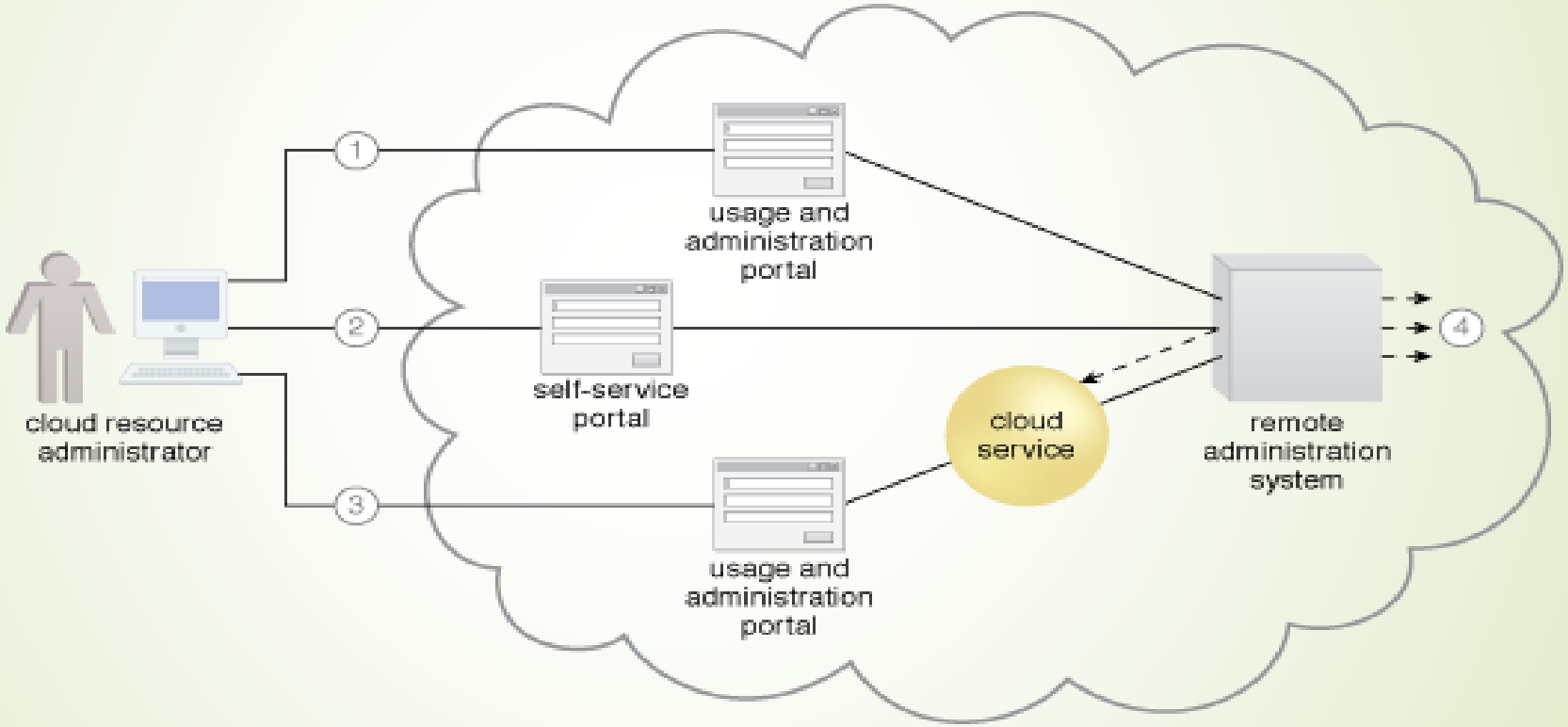
- The remote administration system mechanism provides tools and user-interfaces for external cloud resource administrators to configure and administer cloud-based IT resources.
- Two primary types of portals created with the remote administration system are:

1. Usage and Administration Portal
2. Self-Service Portal

REMOTE ADMINISTRATION SYSTEM



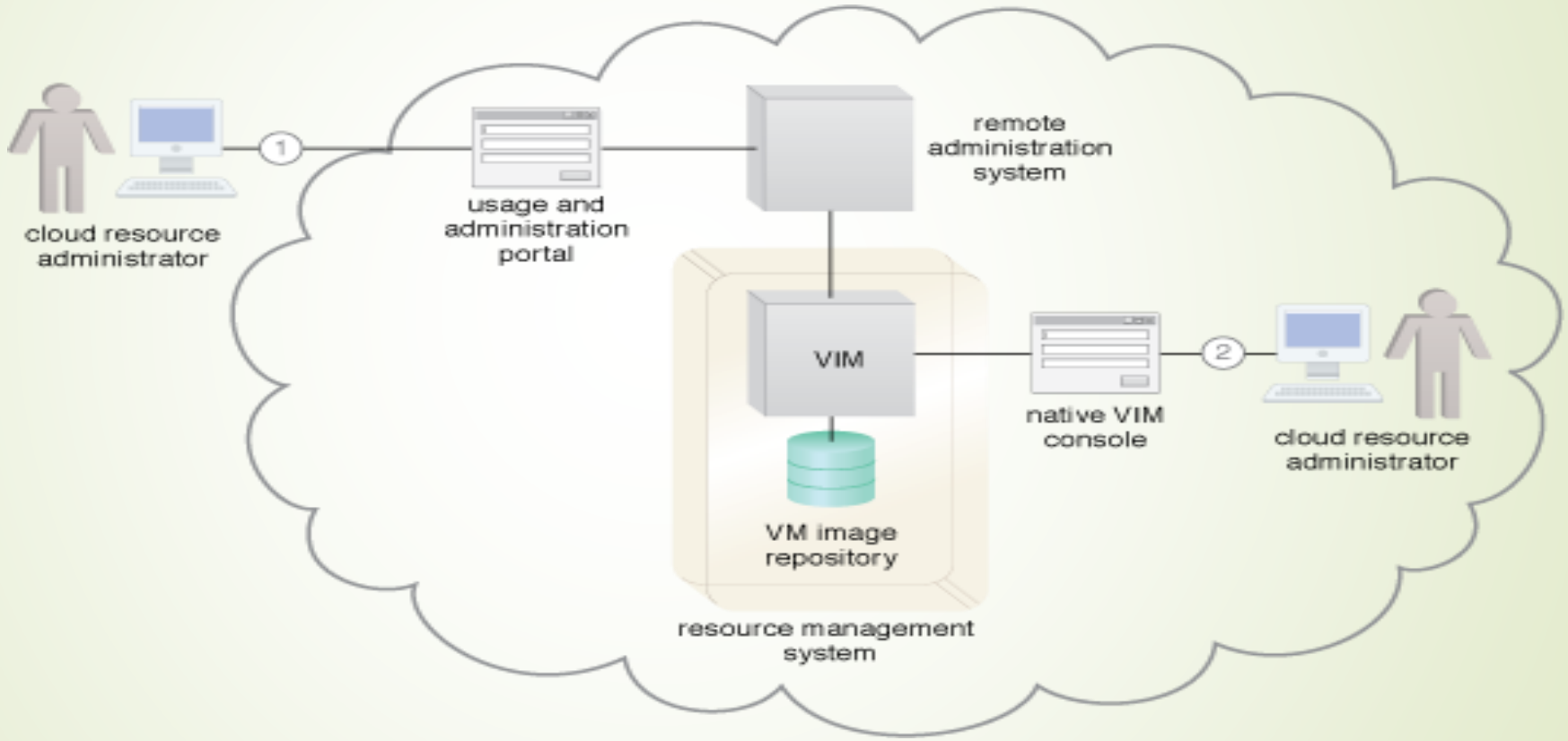
USAGE AND ADMINISTRATION AND SELF-SERVICE PORTALS



RESOURCE MANAGEMENT SYSTEM

- Resource management refers to techniques for managing resources.
- The resource management system mechanism helps coordinate IT resources in response to management actions performed by both cloud consumers and cloud providers.

RESOURCE MANAGEMENT SYSTEM



RESOURCE MANAGEMENT SOFTWARES

- Resource Guru
- Hub Planner
- Saviom
- 10,000ft Plans

IEEE PAPER

Fahimeh Farahnakian, Rami Bahsoon, Pasi Liljeberg,” Self-adaptive Resource Management System in IaaS Clouds”, IEEE 2016.

The focus of this paper is mainly on:

A self-adaptive resource management system that includes :

- PM Status Detection
- VM Placement Optimization
- VM Assignment

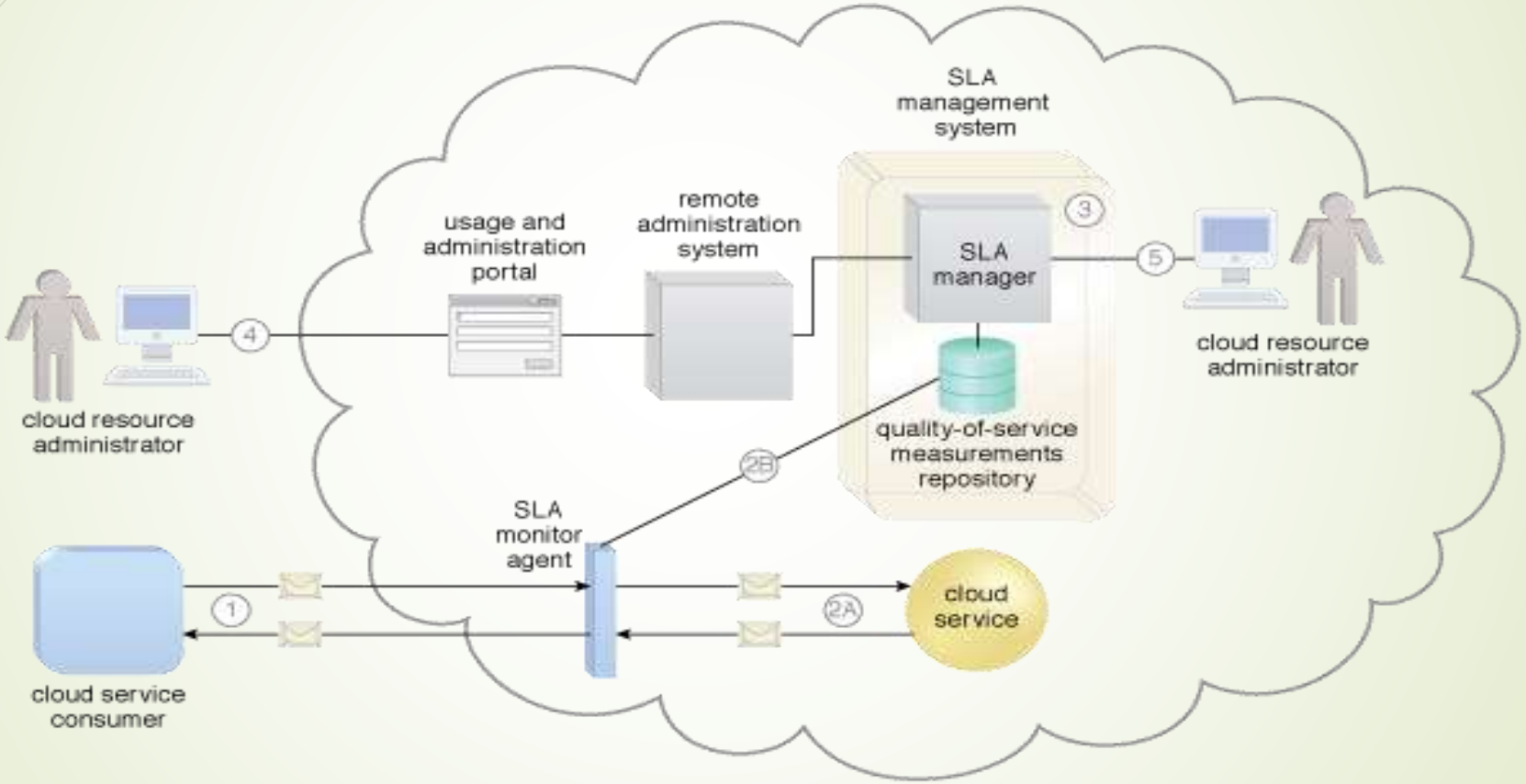
SLA MANAGEMENT SYSTEM

- The SLA monitor mechanism is used to specifically observe the runtime performance of cloud services to ensure that they are fulfilling the contractual QoS requirements published in SLAs.
- The data collected by the SLA monitor is processed by an SLA management system to be aggregated into SLA reporting metrics.

SLA MONITORING STEPS FOR BETTER SERVICE DELIVERY:

1. Transparent SLA monitoring: A prerequisite
2. Ask for third party monitoring
3. Ensure alerting mechanisms are in place
4. Ensure the vendor has effective backup mechanisms
5. Make certain the provider has an integrated ecosystem

SLA MANAGEMENT SYSTEM



SLA MONITORING TOOLS

- ExoPrise
- VMware Hyperic
- AppNeta
- BMC TrueSight Pulse

IEEE PAPER

Xuan Liu, Feng Xu," Cloud Service Monitoring System Based on SLA", IEEE 2013

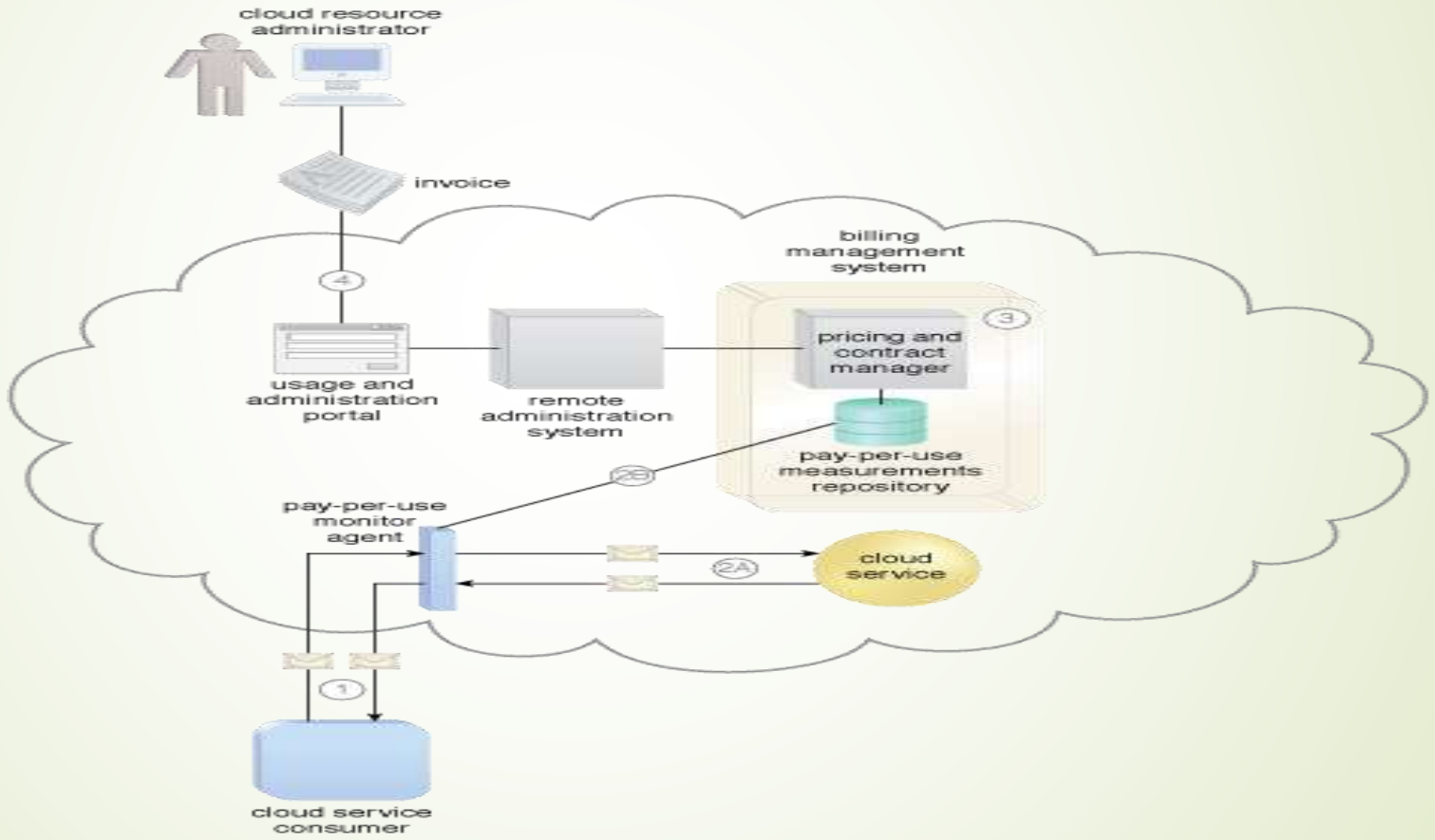
The important points which are covered in this paper are:

1. SLA and its key aspects
    1. Service quality parameter
    2. SLA sementics
2. Cloud service monitoring system structure and process
    1. Cloud service monitoring system structure
    2. Cloud service monitoring system processes

BILLING MANAGEMENT SYSTEM

- The billing management system mechanism is dedicated to the collection and processing of usage data as it pertains to cloud provider accounting and cloud consumer billing.
- The billing management system relies on pay-per-use monitors to gather runtime usage data that is stored in a repository that the system components then draw from for billing reporting and invoicing purposes

PROCESS OF A BILLING MANAGEMENT SYSTEM



CLOUD BILLING SERVICE PROVIDING COMPINIES:

- Amdocs
- CGI Group
- Oracle
- Amazon Web Services

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Thank
you!!