A Framework for Life Cycle of Cloud Services through Semantic Technologies

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ABSTRACT: In data technology (IT) as a service delivered to the tip user could be a paradigm shift that's quick ever-changing the approach businesses appearance at the role of IT at intervals the organization. The service is noninheritable on associate as-needed basis and may be termed as service on demand. Typically, the service is hosted on a cloud or a computing grid and is delivered to the organization via the net or mobile devices. School and university IT organizations area unit expected to stay up with an extended list of competitive demands, such as: Deploying applications and delivering web-based student services at a pace fast rate, usually while not a proportionate increase in allow hardware, software, and personnel. Maintaining a standard IT infrastructure more and more unable to accommodate the growing range of private devices together with tablets, sensible phones, and laptops that students bring into the field surroundings providing comfortable information measure to accommodate again swings in network usage, to unravel this downside the projected system presents a replacement integrated methodology for the life cycle of IT services delivered on the cloud and demonstrate however it will be accustomed represent and reason concerning services and repair necessities so modify service acquisition and consumption from the cloud. The IT services life cycle is split into 5 phases of necessities, discovery, negotiation, composition, and consumption, every part and describes the ontology’s that have developed to represent the ideas and relationships for every part. To indicate however this life cycle will modify the usage of cloud services, projected system describe a cloud storage epitome.

KEYWORDS: discovery, services, negotiation

INTRODUCTION:
REGARDING info technology (IT) as a service delivered to the top user may be a paradigm shift that's fast ever-changing the method businesses appearance at the role of IT within the organization. The outsourcing model is being replaced by a brand new delivery model wherever businesses purchase IT parts like package, hardware or network bandwidth as services from suppliers, who can be based anyplace within the world. The service is non heritable on as-needed basis and might be termed as service on demand. Typically, the service is hosted on a cloud or a computing grid and is delivered to the organization via the net or mobile devices. In such situations, multiple suppliers usually collaborate to create one service for a corporation. In some cases, businesses utilize multiple service suppliers to mitigate risks that will be related to one supplier. In other cases, a business could use one supplier WHO successively utilizes the services of
alternative suppliers. In either case, the delivery of IT service is moving far from one provider mode and is progressively supported the composition of multiple alternative services and assets (technological, human, or process) that will be provided by one or a lot of service suppliers distributed across the network—in the cloud. Moreover, one service element may well be a part of several composite services PRN. The service, in effect, is virtualized on the cloud. It's turning into the preferred methodology to deliver services starting from facilitate desk and back-office functions to infrastructure as a service (IaaS). The virtualized model of service delivery conjointly extends to IT-enabled services (ITeS), which generally include an outsized human part. One consequence of this development is that the consumers currently have additional decisions of service suppliers that they will choose from. However, at present, most of the services area unit delivered as internet services providing a singular functionality. Often, the vexation is on the buyer to obtain these internet services singly and so integrate them per the necessities. There has been some add making brokers that will perform this practicality. However, such brokers work solely on a set, linear description of service practicality which frequently fails to capture the complete necessities of the service required, and the flexibility a shopper may need. So as to be able to take advantage of virtualized service models, it's imperative for the consumer to be able to determine all the constraints or assertions of a service that require to be met at the side of its functional necessities.

PROPOSED SYSTEM

- The proposed methodology will enable practitioners to plan, create, and deploy virtualized services successfully. The key reason to have a semantically rich approach to describe cloud attributes and service-level agreements (SLA) is to permit distributed clients and cloud service providers to automate the process of acquisition and consumption of services.

- In Proposed prototype, the service attributes are the storage size, backup rules, service availability, and service costs. Specifications also list acceptable security levels, data quality, and performance levels of the service software.

- Proposed system used W3C standard Semantic web technologies, such as Web Ontology Language (OWL), Resource Description Framework (RDF), and SPARQL, to develop our prototype system since they enable us to build the vocabulary (or ontology) of our service life cycle using standardized languages that support our design requirements, which include interoperability, sound semantics, web.
integration, and the availability of tools and system components.

- The OWL language has a well-defined semantics that is grounded in first-order logic and model theory. It is possible to embed RDF and OWL knowledge in HTML pages and several search engines (including Google) will find and process some embedded RDF.

**ADVANTAGES**

- Virtualized service models, it is imperative for the consumer to be able to identify all the constraints or assertions of a service that need to be met along with its functional requirements.
- To address the life-cycle issue for virtualized services delivered from the cloud. Proposed system use semantically rich descriptions of the requirements, constraints, and capabilities that are needed by each phase of the life cycle.
- To automate the IT service phases guided by high-level policy constraints provided by consumers, service customers, or service providers.
- Simple user interface used to cloud consumers for discover and acquire disk storage on the cloud by specifying the service attributes, security policies, and compliance policies.

**LITERATURE SURVEY:**

**MANAGING THE QUALITY OF VIRTUALIZED SERVICES**

In this paper, we propose a framework to measure and semi-automatically track quality delivered by a Virtualized service delivery system. The framework provides a mechanism to relate hard metrics typically measured at the backstage of the delivery process to quality related hard and soft metrics tracked at the front stage where the consumer interacts with the service.

**GOODRELATIONS: AN ONTOLOGY FOR DESCRIBING PRODUCTS AND SERVICES OFFERS ON THE WEB**

In this paper, we analyze the complexity of product description on the Semantic Web and define the Good Relations ontology that covers the representational needs of typical business scenarios for commodity products and services.

**ONTOLOGY-BASED METHODOLOGY FOR E-SERVICE DISCOVERY**

Service discovery is a critical aspect in the Service Oriented Computing approach. A model, a methodology and a tool environment based on ontology’s are proposed in this paper. The requester and provider perspectives are discussed, both to support the service publication phase and the search phase.

**QUALITY DRIVEN WEB SERVICES COMPOSITION**

In this paper, we propose a quality-driven Web service composition methodology
for ubiquitous computing environment. Our methodology evaluates the quality of Web services in three dimensions—quality of services, quality of contexts and quality of devices.

A SPIRAL MODEL OF SOFTWARE DEVELOPMENT AND ENHANCEMENT

This article opens with a short description of software process models and the issues they address. Subsequent sections outline the process steps involved in the spiral model; illustrate the application of the spiral model to a software project, using the TRW Software Productivity Project as an example; summarize the primary advantages and implications involved in using the spiral model and the primary difficulties in using it at its current incomplete level of elaboration; and present resulting conclusions.

CONCLUSION:

In this paper, we've got outlined an integrated metaphysics for processes required to automates IT services life cycle the cloud. To the most effective of our information, this is often the primary such effort, and it's vital because it provides a holistic read of steps involved in deploying IT services. Our approach enhances previous work on ontologies for service descriptions in that it's targeted on automating the processes required to procure services on the cloud. The methodology will be referenced by organizations to see what key deliverables they can expect at any stage of the method. We also hope that it'll alter the academe and therefore the trade to be on the “same page” once they discuss IT services on the cloud. The tool that we tend to engineered with success incontestible however our methodology will be wont to considerably automates the acquisition and consumption of cloud-based services thereby reducing the massive time needed by firms to discover and procure cloud-based services. We tend to square measure within the process of emotional this tool to multiple users to research how this scales up.

REFERENCES:


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