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Research Article

The issues of cloud service delivery through virtualization of Dynamically Generated multiple virtual machine Services without missing deadline on the World Wide Web

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Abstract

The issues of cloud service delivery through virtualization is of practical interest in many applications such as detecting an cloud service delivery failures. Cloud service is an umbrella term used to refer to web based development and services. In this paper, we investigate a variety VM cloud techniques. Cloud VM technology allows multiple virtual machines to run on a single physical machine Furthermore, cloud multiple VM servers play the important key roles between users and web sites, we could reduce the response time ,processing time and save network bandwidth. We provide a generalized cloud framework for computing the amount of resources needed to support multiple VM services, without missing the deadline for any cloud service. We construct the problem as an optimization formulation that uses a generic cloud delivery dynamic cost function. Although using Dynamically Generated multiple virtual machines shared-memory IPC is a well-known strategy, the recent introduction of the VM shared memory mechanism to Linux KVM makes the strategy allows data stored remotely to be temporarily cached on desktop computers, mobile phones or other Internet-linked devices.Using the Amazon Simple Storage Service (S3), we confirm Unlimited Storage, $0.20 per GByte of data transferred, $0.15 per GByte-Month for storage used,Second Life Update:1TBytes, 40,000 downloads in 24 hours only and Cloud computing is impossible if you cannot connect to the Internet but our paper confirm Unlimited Storage, $0.80 per GByte of data transferred, $0.85 per GByte-Month for storage used,Second Life Update:3TBytes, 2,40,000 downloads in 24 hours and Cloud computing is impossible if you cannot connect to the Internet.

Keywords:*Distributed cloud storage platform (DCSP), virtual infrastructure management (VIM), Virtual Machine Monitor, Virtual Machine Managers (VMM), Java Virtual Machine(JVM), World Wide Web,Inter Process communication(IPC),Java archives(JAR), Dynamic Virtual Machine(DVM).*

1. Introduction

The issues of cloud service delivery through virtualization provides convenient on-demand network access to a shared pool of configurable cloud resources that can be rapidly deployed with great efficiency and minimal management overhead . One fundamental advantage of the cloud paradigm is computation outsourcing, where the computational power of cloud customers is no longer limited by their resource-constraint devices. By outsourcing the workloads into the cloud, customers could enjoy the literally unlimited computing resources in a pay-per-use manner without committing any large capital outlays in the purchase of both hardware and software and/or the operational overhead therein.

The cloud service benefits, outsourcing computation to the commercial public cloud is also communicating with customers direct control over the systems that consume and produce their data during the computation, which inevitably brings in new security concerns and challenges towards this promising computing model . On the one hand, the outsourced computation workloads often contain sensitive information, such as the business financial records, proprietary research data, or personally identifiable health information etc. To combat against unauthorized information leakage, sensitive data have to be encrypted before outsourcing so as to provide end-to-end data confidentiality assurance in the cloud and beyond. However, ordinary data encryption techniques in essence prevent cloud from performing any meaningful operation of the underlying plaintext data , making the computation over encrypted data a very hard problem. On the other hand, the operational details inside the cloud are not transparent enough to customers . For example, for the computations that require a large amount of computing resources, there are huge financial incentives for the cloud to be lazy if the customers cannot tell the correctness of the output. Besides, possible software bugs, hardware failures, or even outsider attacks might also affect the quality of the computed results. Thus, we argue that the cloud is intrinsically *not secure* from the viewpoint of customers. Without providing a mechanism for secure computation outsourcing, i.e., to protect the sensitive input and output information of the workloads and to validate the integrity of the computation result, it would be hard to

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expect cloud customers to turn over control of their workloads from local machines to cloud solely based on its economic savings and resource flexibility. For practical consideration, such a design should further ensure that customers perform less amount of operations following the mechanism than completing the computations by themselves directly. Otherwise, there is no point for customers to seek help from cloud.

2. Background

There exist various tools and technologies for multi-cloud, such as PlatformVM shared system. This tool help cloud providers construct a distributed cloud storage platform for managing clients' data. However, if such an important platform is vulnerable to security attacks, it would bring irretrievable losses and gains to the clients. For example, the confidential data in an enterprise may be illegally accessed through a remote interface provided by a multi-cloud, or relevant data and archives may be lost with when they are stored into an· uncertain storage pool outside the enterprise virtual machine. Therefore, it is indispensable for cloud service providers to provide security techniques for managing their storage VM cloud services.

Difference between General VM and cloud Multiple Virtual Machines

	General VM	Cloud Multiple Virtual Machines
Data Transfer	Use local machine	Use genral internet
Whole geographical research	Limited machines only	Can be access anywhere in the globe
Service quality and quantity	No need any service	Cloud service delivery
Data access mechanism	A PC with JVM	Dynamic multiple virtual machines on the World Wide Web
Content generation use	Use own content	Provided cloud service virtualization

3. Cloud service delivery through Virtualization Strategy

In recent years, cloud service has become a faster profit growth point by providing a comparably low-cost, scalable, position-independent platform for clients' data. Since multiple cloud environment is constructed based on open architectures and interfaces, it has the capability to incorporate multiple internal and/or external VM cloud services together to provide high interoperability.

We call such a distributed cloud environment as a multi-Cloud (or hybrid cloud). Often, by using virtual infrastructure management (VIM) , a multi-cloud allows clients to easily access his/her resources remotely through interfaces such as Web services provided by distributed applications. There exist various tools and technologies for multicloud JAR files, such as Platform VM JAR files. These VM JAR tools cloud providers construct a distributed cloud storage platform (DCSP) for managing clients' data. However, if such an important platform is vulnerable to security attacks, it would bring irretrievable losses to the clients.

VM technique for a storage provider to prove the integrity and ownership of clients' data without downloading data. The proof-checking without downloading makes it especially important for large-size JAR files and folders (typically including many clients' files) to check whether these data have been tampered with or deleted without downloading the latest version of data. Thus, it is able to replace traditional hash and signature functions in storage outsourcing. Various VM schemes have been recently proposed, such as Scalable VM and Dynamic VM. However, these schemes mainly focus on cloud issues at untrusted servers in a *single* cloud storage provider and are not suitable for a multi-cloud environment.

4. VM Distributed Cloud Environment

VM Cloud System is a scalable and distributed cloud system. This cloud server can be a personal cloud, home cloud, or community cloud server. The VM cloud server can work alone to provide web service, and can also work collaboratively to provide a large scalable web service. Each VM cloud server can provide a cache function, and together they will form a very large scale cache space. It's an integration of Web server, cache, proxy, search engine, socialnetwork, video streaming, large scale database, and VM technology.It provides web builder, community sharing database applications, Integrated network management and backup services.

5. Multiple virtual machines on one physical machine cloud Services

Multiple virtual machines on one physical machine Applications run unmodified as on real machine. Per-client caches may maintain consistency of cached files with server copies by issuing an optional If-Modified-Since GET to the HTTP server or proxy server.

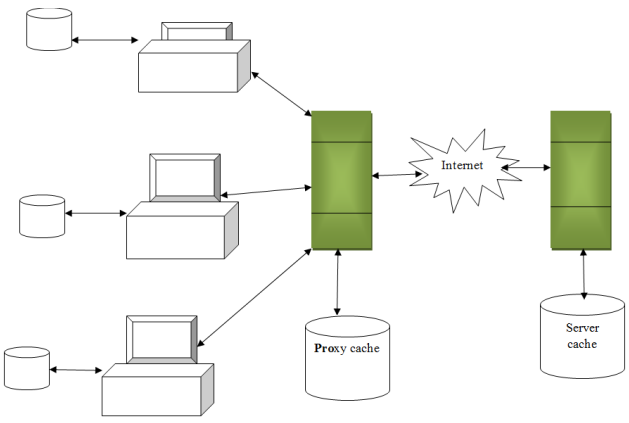

Fig: Browser cache

Multiple Virtual Machines is used in three forms in the Web. These machines run on the Host Operating System,

which is built into a Web browser. A Web client with caching stores not only the documents currently displayed in browser windows, but also documents requested in the past. This Host Operating system is also used for (temporary) storage of the history. There are two forms of client caches: persistent and non persistent. A persistent client cache retains its documents between invocations of the Web browser; web browser uses a persistent cache

A non-persistent client cache (used in Host Operating System) de allocates any memory or disk used for caching when the user quits the browser.

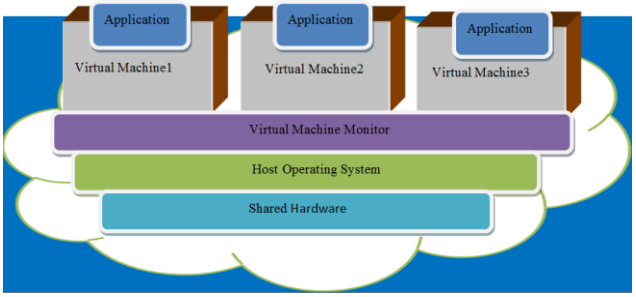

Fig: Multiple Virtual Machines

Multiple VM's implements different applications .These applications run Host Operating System. Those applications displays results on Virtual Machine Monitor. Shared CPUs distributes shared memory with data.

6. Virtual Machine Technology for Load Balancer

Cloud Computing provides convenient on-demand network access to a shared pool of configurable computing VM resources that can be rapidly deployed with great efficiency and minimal management overhead . VMs Spread load over server in different OS. Present a single public address (VIP) for a service Virtual IP(VIP) is 192.121.10.1

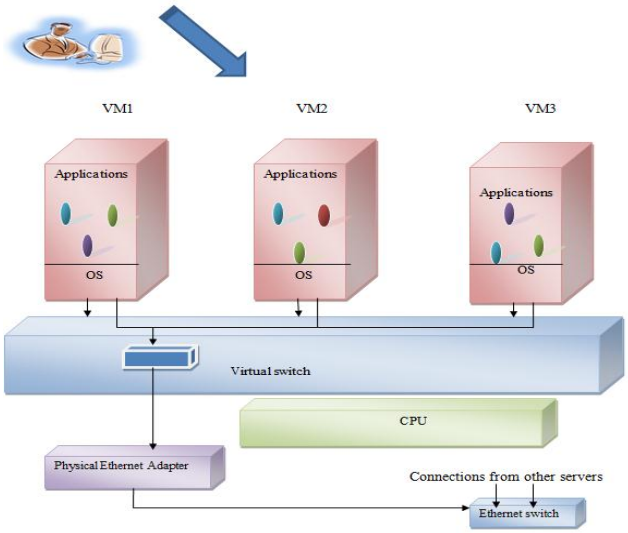

Fig: Virtual Machine technology for Load Balancer

A platform is the hardware or software environment in which a program runs. We've already mentioned some of the most popular platforms like Windows 2000, Linux, Solaris, and MacOS. Most platforms can be described as a combination of the Host operating system and shared hardware. The Java platform differs from most other platforms in that it's a software-only platform that runs on top of other shared hardware-based platforms.

VM can migrate from one computer to another Virtual Switch in Server. One fundamental advantage of the cloud paradigm is computation outsourcing, where the computational power of cloud customers is no longer limited by their resource-constraint devices. By outsourcing the workloads into the cloud, customers could enjoy the literally unlimited computing VM resources in a pay-per-use manner without committing any large capital outlays in the purchase of both hardware and software and/or the operational overhead therein

7. Implementation of VM

Cloud enhanced DVM algorithm by incorporating a frequency count , so the algorithm is called Dynamic Virtual Machine algorithm.

$$K(p)=N+F(p)*V(p)$$
$$S(p)$$

Where F(p) is the access count of object p,N is the No .of Virtual Machines,V is the Virtual Machine Monitor of object p and S is the shared hardware of Object p VMs share many resources: They are CPU, cache, memory, disk, network, etc. Virtual Machine Managers (VMM) goal is : Provide Isolation. If we Deployed VMMs don't perfectly isolate VMs.

Although using Dynamically Generated multiple virtual machines shared-memory IPC is a well-known strategy, the recent introduction of the VM shared memory mechanism to Linux KVM makes the strategy allows data stored remotely to be temporarily cached on desktop computers, mobile phones or other Internet-linked devices.Using the Amazon Simple Storage Service (S3), we confirm Unlimited Storage, $0.20 per GByte of data transferred, $0.15 per GByte-Month for storage used,Second Life Update:1TBytes, 40,000 downloads in 24 hours only and Cloud computing is impossible if you cannot connect to the Internet but our paper confirm Unlimited Storage, $0.80 per GByte of data transferred, $0.85 per GByte-Month for storage used,Second Life Update:3TBytes, 2,40,000 downloads in 24 hours and Cloud computing is impossible if you cannot connect to the Internet.

Advantages

- Avoid dependecy problem as with the centralized cloud VM solution.
- More Reliable
- Much more cost effective
- Enable high bandwidth local sharing and save overall bandwidth usage in the internet.
- Integration of popular web cloud services
- Lower computer costs

- When you are using clod web-based applications, your PC can be less expensive, with a smaller hard disk, less memory, more efficient processor.
- You do not need a high-powered and high-priced computer to run cloud services VM web-based applications.
- Since applications run in the cloud, not on the desktop PC, your desktop PC does not need the processing power or hard disk space demanded by traditional desktop software.
- With few large programs hogging your computer's memory, you will see better performance from your PC.
- Computers in a cloud Virtual Management system boot and run faster because they have fewer programs and processes loaded into memory.
- Reduced software costs
- Unlimited storage capacity
- Increased data reliability

Disadvantages

- Does not work well with low-speed connections
- Cloud services offers virtually limitless storage
- Cloud service is impossible if you cannot connect to the Internet.
- Since you use the Internet to connect to both your applications and documents, if you do not have an Internet connection you cannot access anything, even your own documents.
- Even with a fast connection, VM web-based applications can sometimes be slower than accessing a similar software program on your desktop P
- Theoretically, data stored in the cloud is safe, replicated across multiple machines.
- But on the off chance that your data goes missing, you have no physical or local backup.
- Put simply, relying on the cloud puts you at risk if the cloud lets you down.

8. Future Work

In Future, DVM algorithm can be used for enhancing VM performance of cloud policies.Many of the cloud activities loosely grouped together under cloud computing have already been happening and centralized computing activity is not a new phenomenon. However there are concerns that the mainstream adoption of cloud computing could cause many problems for users. Many new open multiple VMs source systems appearing that you can install and run on your local system should be able to run a variety of applications on these systems.

Conclusion

We proposed innovative approaches for automatically logging any access to the data in the cloud VM together with an auditing mechanism. We presented the construction of an efficient cloud scheme for distributed VMs cloud storage. We have proposed a cooperative cloud scheme to support dynamic VMs scalability on multiple dynamic storage for cloud servers. ur approach allows the data owner to not only audit his content but also enforce strong back-end protection. We also showed that our cloud scheme provided all security properties required by zero knowledge interactive proof system. Furthermore, we optimized Dynamically Generated multiple virtual machines on the World Wide Web performance. Our experiments clearly demonstrated that our approaches only introduce a small amount of computation and communication overheads. Therefore, our solution can be treated as a new candidate for data integrity verification in outsourcing cloud data storage systems.

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