EC2 vs VMforce?

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Executive Summary:

"Cloud computing" has replaced "Web 2.0" and "social networking" as the latest buzz phrase. Today, every other company or organization is gearing itself to move onto the cloud. Getting onto the cloud is itself a big deal but what is more challenging is to decide on which cloud one should go onto. Today, the three most impactful companies providing cloud services are Amazon (EC2), Salesforce and Microsoft (Azure). Other than this, VMforce, the first enterprise cloud computing service for java developers, is grabbing significant attention in the market.

Amazon's EC2 is an Infrastructure-as-a-Service (IaaS) solution where customers can consume a generic server resource in the cloud. It still requires customers to install and manage an application stack including the application server, database, and other middleware elements. On the other hand, VMforce is a full Platform-as-a-service (PaaS) solution where the customer doesn't need to worry about installing and managing the middleware and application stack. All that 'plumbing' is done as a service. EC2 pricing is per instance-hour consumed for each instance type and varies based on several different factors. Pricing for VMforce will be announced closer to its release date.

EC2 (AMAZON):

Amazon's EC2 is a cloud computing service that allows users to deploy and run their applications on rented virtual computers. Users can boot what are called Amazon Machine Images and create an instance, also known as a virtual machine, and pay for the amount of computing power they need by the hour. EC2 is particularly well suited for applications that experience hourly, daily, or weekly variability in usage. Below are some of its main features:

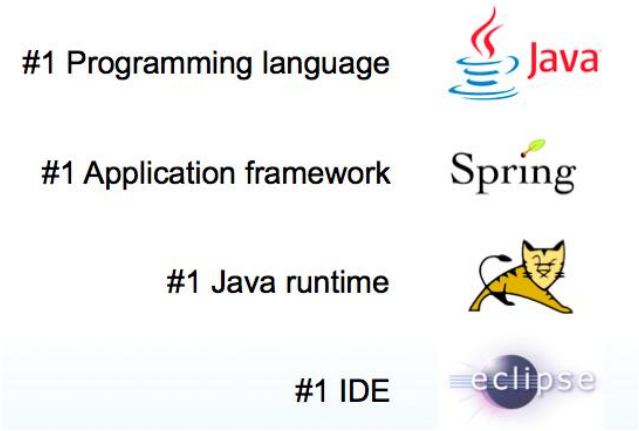
- **Elasticity/ Control** :
    - Increase or decrease network capacity within minutes
    - Applications can automatically scale themselves up and down depending on their need as everything is controlled by web service APIs
    - You have complete control of your instances
- **Flexibility/ Durability** :
    - Choice of multiple instance types, operating systems, and software packages
    - Off-instance storage that persists independently from the life of an instance
    - Amazon elastic block store (EBS) volumes are automatically replicated on the backend
    - Ability to create point-in-time consistent snapshots of your volumes that are stored in Amazon S3 and automatically replicated across multiple availability zones.
- **Multiple Locations** :
    - Can store instances in multiple locations (regions and zones)
    - Protect your applications from failure of a single location
    - Currently available in four regions: US East (Northern Virginia), US West (Northern California), EU (Ireland), and Asia Pacific (Singapore).
- **Elastic IP Addresses/ Amazon Virtual Private Cloud (VPN)** :
    - Static IP addresses designed for dynamic cloud computing associated with your account, not a particular instance
    - Elastic IP addresses allow you to mask instance or availability zone failures by programmatically remapping your public IP addresses to any instance in your account
- **Amazon Virtual Private Cloud(VPN)/Amazon CloudWatch**:
    - A secure and seamless bridge between a company's existing IT infrastructure and the AWS cloud
    - Extend existing management capabilities by connect existing infrastructure to a set of isolated AWS compute resources such as security services, firewalls, and intrusion detection systems via a VPN connection
    - Amazon CloudWatch is a web service that provides monitoring for AWS cloud resources

- Provides visibility into resource utilization, operational performance, and overall demand patterns—including metrics such as CPU utilization, disk reads and writes, and network traffic.

- **Auto Scaling/ Elastic Load Balancing:**
  - Uses Xen virtualization service which allows users to adapt to changing performance and capacity needs with an auto-scaling function
  - Automatically distribute incoming application traffic across multiple Amazon EC2 instances leading to greater fault tolerance
  - Detects unhealthy instances within a pool and automatically reroutes traffic to healthy instances until the unhealthy instances have been restored

VMFORCE (SALESFORCE AND VMWARE):

VMforce is the shared vision of Salesforce.com and VMware. With VMforce, the customer focuses on the application logic and leaves the rest to VMware and Salesforce.com. VMforce is aimed at SaaS and Web services developers. The major components of VMforce are VMware's Spring platform -- and its community of Java developers -- and Salesforce.com's Force.com platform.



Below are some of its main features:

- **OpenSource**:
  - VMforce lets you program in the open source language Java
  - Reuse existing Java libraries and applications
- **Simplicity/Elasticity**:
  - No hardware to manage, no software stack to install, patch, tune, or upgrade
  - Just drag and drop your Java app to VMforce to deploy
  - Java developers can add built-in collaboration, mobile, and analytics components to their apps
  - All apps on VMforce are elastic which fosters easy scaling up app servers, databases, or infrastructure.

- **Spring Framework/Chatter collaboration services**:
    - VMforce will use the SpringSource Tool Suite that will allow applications to run on the tc Server, the Enterprise version of Apache Tomcat
    - Customers can use the Force.com search and reporting services, the analytics service
    - Pre-built services from Chatter include profiles, status updates, groups, feeds, document sharing, the Chatter API and more.

To conclude, below is the table with brief comparison between the two:

Amazon Ec2	VMforce
IaaS	PaaS
Virtual services in the cloud	Complete platform as a service
Generic Server Images	Complete development service
Self-assembly & management of stack	Automatic stack management
Self-managed database	Database as a service
Self-managed scalability	Automatic scalability
AWS Services	Chatter services

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