CS551 Advanced Software Engineering

Feb. 25 (T), 2014

In-Class Exercise

http://cloud-computing.findthebest.com/compare/5-15-17-24/Amazon-EC2-vs-Google-App-Engine-vs-Microsoft-Windows-Azure-vs-IBM

Name:

		Amazon AWS	**Google AppEngine**	**Microsoft Azure**	**IBM Smart Business Dev.**
Focus		Infrastucture as a service	Platform as a service	Platform as a service	Infrastucture as a service
Infrastructure & Virtualization Architecture		OS level running on a Xen hypervisor	Application container	OS level through fabric controller	Hypervisors
Platforms		Linux, Amazon Linux, OpenSUSE Linux, Windows server 2003, Windows server 2008, Oracle Enterprise Linux, Ubuntu Linux	Linux OS, Windows server 2008	Oracle Enterprise Linux, Red Hat Enterprise Linux, Ubuntu Linux, Windows Server 2003, Windows Server 2008	Windows server 2008, Red Hat Enterprise Linux, Suse Linux
Persistent Storage		160GB	500MB	225GB	60GB
Monitoring		Yes(free of cost) Done with Amazon Cloud Watch to monitor your throughput and I/O sizes.	No	Yes(free of Cost)	Yes(charges apply)
Load Balancing		Yes(charges apply) Elastic load balancing	Yes (free of Cost) Automatic Scaling and Load Balancing	Yes(free of Cost) KEMP Azure Load Balancer	Yes IBM Edge
Message Queues		Yes Done through Amazon SQS	Yes Task Queue REST API	Yes	Yes
Development Tools		Amazon EC2 AMI Tools, Amazon Cloud Watch Command Line Tool, Web Console, Rails and Python	Google Accounts, URL Fetch, Image Manipulation, APIs for DataStore, Email Services	Microsoft.Net Services, Microsoft SQL services, Microsoft SharePoint Services, Microsoft Dynamics CRM services, Live Services	IBM Rational Tools
Integration with other services		Yes, they can integrate with other services	Yes, they can integrate with other services	Yes, they can integrate with other services	Yes, they can integrate with other services
Web APIs		Yes	No	Yes	Yes
Programming Framework		PHP, Python, Ruby, WinDev, AMI(Amazon Machine Image), APL, Java	Java, Python	Java, Ruby, Visual Basic, C#, Microsoft.Net, Python	Java, Ruby, Visual Basic, WinDev, PHP, Python, APL
Pricing	Machine	$0.145 per hour	$0.10 per hour	2 Cores $0.18/hour 8 Cores $0.72/hour	$0.0965 per hour
	Storage	$0.12 per GB/month	$0.18 per GB/month	$0.095 per GB/month	$0.19 per GB/month
	I/O	$3.580/hour	$0.08/hour	$0.072/hour	$0.125/hour
	Bandwidth	Inbound-- 0₡ per GB Outbound--12₡ per GB	Inbound-- Free Outbound--12₡ per GB	Inbound -- 10₡ per GB Outbound--12₡ per GB	Inbound-- 15₡ per GB Outbound--15₡ per GB