**CLOUD COMPUTING PLATFORM COMPARISION**

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|  | | Amazon AWS | Google AppEngine | Microsoft Azure | IBM Smart Business Dev. |
| Focus | | Public sector, educational institutions | Rapid develop, deploy and iterate application without system administration. | Public cloud | Hybrid cloud and private cloud |
| Infrastructure and virtualization architecture | | Flexibility to launch application regardless of use case or industry | Uses search engine infrastructure with redundancy, global network and products like spanner,Flume | Deploy a full range of open and community driven OS and software solutions. | Flexibility to have public private or hybrid clouds depending on business needs. |
| Platforms | | IAAS | PAAS | IAAS, PAAS | IAAS |
| Persistent Storage | | Amazon Elastic Block store (EBS) allows user to create storage volumes attachment to Amazon EC2 instances. | MySQL using cloud SQL, object storage using cloud storage. | Azure storage | Provisioned separately from any particular instance, and can be attached to running under the same account in the same data center. |
| Monitoring | | Amazon cloud watch is the monitoring service. | Google cloud uses the monitoring API in the developer’s console. | Their two levels of load balancing   1. DNS level which uses round robin and traffic manager methods   Network level –done with Azure load balancer. | IBM smart cloud monitoring tool monitors the health and performance of a private cloud infrastructure. |
| Load Balancing | | Uses ELB (Elastic Load Balancing) | Use to make further scale out capabilities in Google compute engine. | Azure load balancer. | Elastic load  Balancing.. |
| Message Queues | | SQS: Simple Queue Service, which is a fast, reliable service | Push Queues. (these are written in Java) | Azure Data Queues. Service Bus Queues | Web sphere and Soft Layer Message Queues |
| Development Tools | | Primary SDKs | Eclipse, IntellIJ, Maven, Git, | Azure SDKs, Azure PowerShell. | IBM Domino Designer, Connector for SAP solutions. |
| Integration with other services | | All services are designed to work with other AWS | A number of API’s available like maps, contacts , calendar etc. | Large number of .NET services including line services. Microsoft Azures Biz Talk Services. | Sandbox, Open clove ,CRM |
| Web APIs | | Yes | Yes | Yes | Yes |
| Programming Framework | | PHP  Python  Ruby | Python | .NET  Java  Node  Ruby | Java  Node  Ruby |
| Pricing | Machine CPU | $0.14 / hour | $0.10 / hour | $0.12 / hour | $0.10 / hour |
| Storage | $0.25 / GB / month | $0.15 / GB / month | $0.15 / GB / month | $0.15 / GB / month |
| I/O | $0.01 / 1000 requests | $0.12 / GB / month | $0.01 / 1000 requests | $0.01 / 1000 requests |
| Bandwidth | $0.10 / GB | $0.10 / GB | $0.10 / GB | $0.10 / GB |