**Cloud Computing Services Comparison**

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|  | | Amazon AWS | Google AppEngine | Microsoft Azure | IBM Smart Business Dev. |
| focus | | It is a public sector like government which offer quick delivery | Offers quick development of apps | It is a large cloud which focuses on app development | It is private cloud focuses on resilence and energy efficiency |
| Infrastructure and virtualization architecture | | Reasonable cost and available in large amounts | Operational considerations are less | Risk involved and moderate cost. | Less cost and risk involved to some extent |
| Platforms | | IAAS | PAAS | IAAS and PAAS | IAAS and PAAS |
| Persistent Storage | | Amazon store | Objects, queries and transactions stored using cloud and | Stored in virtual machines | Stored in virtual disk drivers |
| Monitoring | | Amazon cloud watch | Monitored by dashboards in Google cloud | Monitored using verbose to increase performance | IBM cloud monitors performance of cloud infrastructure |
| Load Balancing | | Yes, Elastic Load balancing(ELB) provides load balancing upto 700 hours. | Uses data structures like queues and stacks | Uses DNS , Data queues and and network buses | Uses message queues and has dynamic load balancing capacity |
| Message Queues | | Reliable, secure and fast | Fast and messages are sent in between different processes and threads | Azure data queues and service queues | Message queues contains integrity |
| Development Tools | | IDE toolkit,  SDKs and command line tools | Jenkins, Eclipse, and maven and Google app engine. | .Net, PHP, and power shell | IBM Rational rose, domino manager and asset manager |
| Integration with other services | | To some extent | Can integrate closely using services like map/chart API | Only in .Net and some SAAS systems | Sandbox and open stack cloud manager |
| Web APIs | | High performance | Yes | Yes | Yes |
| Programming Framework | | Java , ruby , .Net | Go, Java, PHP and Python | Java, .Net, python and Node | COBOL, java |
| Pricing | Machine CPU | $0.14/ hr | $0.10/ hr | $0.12/ hr | $0.10/ hr |
| Storage | $0.25 /GB | $0.15 /GB | $0.15 / GB | $0.15 /GB |
| I/O  (per 1000 requests) | $0.05 | $0.12 | $0.05 | $0.01 |
| Bandwidth  (per 1 GB) | $0.15 | $0.10 | $0.10 | $0.10 |