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| --- | --- | --- | --- | --- | --- |
|  | | Amazon AWS | Google AppEngin | 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 | | EC2 Elastic Compute Cloud upon which you can 32 or 64 AMI’s | Uses search engine infrastructure with redundancy, global network and products like spanner,Flume | Servers at back end runs in virtual machine on Windows Azure while front end is in .net. | Virtual Machine instances multiple sizes for 32 & 64 bit architectures. |
| Platforms | | Linux and windows severs | IAAS,PAAS | Microsoft Server 2008 | Redhat,SUSE & Windows |
| Persistent Storage | | EBS:Elastic Block Storage  S3:simple Storage Service | Gdisk-bulk storage | Standard Application Storage | Bulk Storage |
| Monitoring | | CloudWatch | Google cloud uses the monitoring API in the developer’s console. | Management Pack | IBM Tivoli |
| 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  SMS-Simple Message Service | Push Queues. (these are written in Java) | Azure DataQueues | Web sphere and Soft Layer Message Queues |
| Development Tools | | Web console command line,API’s for all services,SDK’s for java,PHP,Rails & Python,as wll as several eclipse plugins | Java plugin for eclipse & python software development kit(SDK) | Visual studio & SDKfor .NET | 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 | | Linux-based Amazon Machine Image | Python | .NET  node.js  java | Java  Node,js  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 |

Cloud Computing Platforms Comparison