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|  | | Amazon AWS | Google AppEngin | Microsoft Azure | IBM Smart Business Dev. |
| focus | | It is providing Infrastructure as a service | It is providing Platform as a service | It is providing both platform and Infrastructure as a services | It is providing infrastructure as a service |
| Infrastructure and virtualization architecture | | Elastic Compute Cloud Instantiates 32\*64 bit images | Google itself gives the specifications | Backend is Virtual Machines and Front end is .NET | For 32 & 64 bit architectures Virtual Machine instances have different sizes |
| Platforms | | Since it is providing Infrastructure as a service. The Platforms on which it can work is Linux and Windows | Google Cloud Platform | Infrastructure as a Service and Platform as a Service | Platform as a Service and the other platforms are IBM, Cisco, Citrix and EMC |
| Persistent Storage | | Amazon Elastic Block Store provides the persistent block level storage for AWS | App Engine Data Store | For the Standard Application Storage it is done in the Azure SQL Database in the virtual machines. We can run freely on the MongoDB and Cassandra which are NoSQL Tools | Tivoli Storage manager |
| Monitoring | | There are various Monitoring Techniques like Alarms, Metrics and Application Programming Interface Requests in the Amazon Cloud Match | Monitoring Application Programming Interface. Administration Console which is completely web based | Monitoring can be done by the Azure Monitoring Portal | IBM Tivoli Monitoring |
| Load Balancing | | Amazon Elastic Load Balancing processes the Elastic load and data process | Server side load balancing id provided by the Google Engine | There are two types of the Load balancing  a)DNS: Round Robin Load Balancing  b)Network-Azure Load Balancing | Randomized Hydrodynamic Load Balancing |
| Message Queues | | * Amazon Simple Queue Services | The Persistent Storage used is Google Cloud Storage | * Azure Queues * Service Bus Queues | * Nastel Auto pilot Websphere * Soft Layer Message Queues |
| Development Tools | | SDK’s   * Android * Browser * IOS * Java * PHP * .NET * Python * Node.Js * Ruby   IDE Tool Kit   * Eclipse * Visual Studio   Command Line Tools   * AWS Command Line Interface * Windows PowerShell   Are the Development Tools | Datastore SQLite Stub | * Azure Software Development Kit * Azure tools for Visual Studio | * Enterprise Integrater for Domino * Eclipse Java Plug-in * IBM Domino Designer * Expeditor |
| Integration with other services | | All services are designed to work | Google provides a large number of API’s like Maps,Calenders etc. | * Azure Virtual Machines * Azure service Bus | * Sandbox * CRM |
| Web APIs | | Yes, Amazon Web Service is Providing the web API’s | Yes,Google App Engine is also providing the Web API’s | Yes,Microsoft Azure is providing the Web API’s | Yes,IBM Smart Business Development is providing the Web API’s |
| Programming Framework | | Amazon Flow Framework is one of the Programming Framework Provided by the Amazon Web Services.In addition to it .It also provides in .NET,Java,PHP,Python,Ruby | * Go * Java * PHP * Python | * .NET * Java * Node * PHP * Python * Ruby | * Java * Node * Ruby |
| Pricing | Machine CPU | It charges $0.15/hr | Pricing is done for the 1.2GHz x86 intel Processor-free for 6.5 hours CPU time  For processing the requests of CPU usage it charges $0.10/hr  When CPU is in the idle state no need to pay | Pricing is done for the 1.2GHz x86 intel Processor  It charges $0.12/hr for CPU usage in processing requests | For the 1.5GHz Intel Processor It charges $0.1/hr |
| Storage | It has three kinds of Storage  Standard Storage. Standard Redundancy Storage, Glacier Storage. It collects $0.0300/GB/Month for Standard Storage. It collects $0.0240/GB/Month for Redundancy Storage. It collects $0.0100/GB/Month | It has non-relational storage.It collects $0.15/GB/Month.The size of the data consists of the overhead data,metadata and storage for indexes.  2)Data is also stored in the various data locations likedatastore,blobstore and memcache  3)We also pay for the data usages | It has non-relational storage like theGoogle App Engine.  1)It charges 0.15GB/Month.  It also collects money for the storage transactions.It collects $0.0100 | It is charging per GB per month. It is now charging $0.15/GB/Month. |
| I/O | It charges $0.05 /Million Input/Output Requets | It charges for $0.01 and $0.001 for write and read operations respectively | It charges same as Google App Engine .Which is $0.01 for write operations and $0.001operations for read operations | Similar to Google App Engine and Microsoft Azure.It charges $0.01 for write operations and $0.001 operations for the read operations. |
| Bandwidth | It charges more for the incoming and less for the outgoing. It collects 0.1/GB for incoming. It collects 0.15/GB for outgoing | It is charges free for 1GB of the incoming and the outgoing traffics.After that it collects $0.10 for incoming and $0.15 for outgoing, | It charges different for Asia and different places.  For Asia it is $0.30/GB for incoming and $0.45/GB for outgoing.  For other places $0.10/GB for incoming and $0.15/GB for outgoing | It charges similar to Microsoft Azure.Which is $0.10/GB for incoming and $0.15/GB for outgoing |

Cloud Computing Platforms Comparison

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