|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | Amazon AWS | Google AppEngine | Microsoft Azure | IBM Smart Business Dev. |
| focus | | The service model is Infrastructure as a Service and focuses on Public Cloud. | The service model is Platform as a Service and focuses on Public Cloud. | The service model is Infrastructure as a Service and focuses on Public Cloud. | The service model is Infrastructure as a Service and focuses on Private and Hybrid Cloud. |
| Infrastructure and virtualization architecture | | Amazon EC2 for both 32 and 64 bit. Uses XEN Para-virtualization architecture. | Google Specified virtualization Architecture. | Microsoft Azure virtual machines using windows servers. Hyper-V virtualization on Azure Compute infrastructure. | Virtual machine instances (32 and 64 bit) and Cloud Computing Reference Architecture. |
| Platforms | | Different versions of Linux and Windows | NA | Microsoft server | SUSE Linux, Red hat Linux and windows. |
| Persistent Storage | | Simple Storage Service (S3), Simple DB  and Relational Database Service (RDS) | App Engine Data store. | Azure Import/Export, Azure SQL Database, Azure File Service, Tables and Blobs. | IBM Smart Business Storage. |
| Monitoring | | Provides Amazon Cloud Watch. | Provides Google Cloud monitoring console. | Provides Azure Management Portal. | Provides IBM smart cloud monitoring tool. |
| Load Balancing | | Uses AWS elastic load balancing. | Uses Google Compute Engine Load Balancing. | Uses Azure Traffic Manager and  Azure Internal Load Balancing. | Uses Soft Layer Load balancing. |
| Message Queues | | Simple Queue Service (SQS). | Push Queues and  Pull Queues. | Azure Data Queues. | NA |
| Development Tools | | AWS Management Console,  AWS Toolkit for Microsoft Visual Studio, AWS Toolkit for Eclipse. | Google App Engine SDKs for Java, PHP, Python and Go.  Eclipse plugin. | SDKs for Java, .NET, Node.js, PHP, Python, Ruby. Windows Power Shell, Azure command-line interface. | Eclipse plugin. |
| Integration with other services | | Integrate with AWS services S3 and Amazon EC2. | Google Task REST API's. | Integration with .NET live services. | NA |
| Web APIs | | Provided. | Provided. | Provided. | Provided. |
| Programming Framework | | .NET, Java, PHP,  Python and  Ruby. | Go, Java, PHP and  Python. | .NET, Java, Node, PHP, Python and Ruby. | Java, Node, Ruby. |
| Pricing | Machine CPU | $ 0.14 per hour. | $0.10 per hour. | $0.12 per hour. | $0.10 per hour. |
| Storage | $0.25 per GB per month. | $0.18 per GB per month. | $0.15 per GB per month. | $0.15 per GB per month. |
| I/O | $0.01 per 1000 requests. | $0.02 per 1000 requests. | $0.02 per 1000 requests. | $0.01 per 1000 requests. |
| Bandwidth | $0.10 per GB. | $0.10 per GB. | $0.10 per GB. | $0.10 per GB. |

Cloud Computing Platforms Comparison