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| --- | --- | --- | --- | --- | --- |
|  | | Amazon AWS | Google AppEngin | Microsoft Azure | IBM Smart Business Dev. |
| focus | | Education and public sectors | quick development without administrative control | Cloud infrastructure | Hybrid cloud infrastructure |
| Infrastructure and virtualization architecture | | Low cost and highly scalable. Elastice compute cloud upon which you can instantiate 32 or 64 bit amazon machine images (AMIs) or upload your XEN virtual machine images | Specifications by google search engine with redundancy and network products | Front end uses .net server where as backend uses virtual machines on azure | Public, private cloud dependency flexibility.  Multiple virtual machine instances. |
| Platforms | | Windows And Linux Servers | Microsoft Server 2008 | NA | Redhat, SUSE and Windows |
| Persistent Storage | | EBS allows attachment to Amazon EC2 instance | bulk Storage using Gdisk | SQL database and uses NOSQL tools too | Bulk Storage |
| Monitoring | | Amazon Cloud watch service | Developer console uses specific cloud APIs of Google | Management portal of azure | IBM Tivoli does monitoring |
| Load Balancing | | Uses Elastic Load Balancing(ELB) which takes care of load balancing | Available | DNS level load balancing and network level load balancing by azure | Load balancing and routing by shared service |
| Message Queues | | Simple Queue service(SQS) by amazon | Generic push queues and pull queues | Azure Data Queues | NA |
| Development Tools | | IDE,web console, command line interface, SDK’s for Java, PHP, python | Eclipse, Git, Maven | Visual Studio & SDK for .NET | Eclipse with plugins |
| Integration with other services | | AWS services integrated with DB | Memcache and other APIs are available | Live services including .net services | NA |
| Web APIs | | Yes | Yes | Yes | Yes |
| Programming Framework | | Java  .net  PHP  python | PYTHON | Java  .net  ruby | Java  .net  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 | $0.1 / 1000 requests | $0.02 / 1000 requests | $0.01 / 1000 requests |
| Bandwidth | $0.10/ GB | 0.10 / Gigabytes / | $0.10/ GB | $0.10/ GB |

Cloud Computing Platforms Comparison