|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | Amazon AWS | Google AppEngin | Microsoft Azure | IBM Smart Business Dev. |
| focus | | Public cloud | Public cloud | Public | Hybrid |
| Infrastructure and virtualization architecture | | Flexible and secure | Google infrastructure and virtualization architecture | Azure Hypervisor provides the Virtualization. | Flexibility to public private or hybrid depends on business requirements |
| Platforms | | IAAS | PAAS | IAAS, PAAS | IAAS |
| Persistent Storage | | Block level storage volumes for use with Amazon EC2 instances. | MySQL using cloud object storage using cloud storage. | Azure storage | Separate provisioned for any particular instance. |
| Monitoring | | Amazon CloudWatch | Monitoring API in the developer’s console. | Two levels of load balancing  DNS level which uses round robin and traffic manager methods  And Network level done with Azure balance loader. | IBM® SmartCloud Monitoring tool |
| Load Balancing | | Elastic Load Balancing automatically distributes incoming application traffic across multiple Amazon EC2 instances in the cloud | Use to make further scale out capabilities in Google compute engine. | Azure load balancer | Elastic load  Balancing. |
| Message Queues | | Simple Queue Service | Push Queues. | Azure Data Queues. Service Bus Queues | Web sphere, Soft Layer Message Queues |
| Development Tools | | AWS Toolkit for Microsoft Visual Studio AWS Management Console, AWS Toolkit for Eclipse, | IntellIJ, Maven, Git, Jenkins , Netbeans, Eclipse | Azure SDKs, Azure PowerShell. | 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 | Microsoft Azures Biz Talk Services.. | Sandbox, Open clove ,CRM |
| Web APIs | | Yes | Yes | Yes | Yes |
| Programming Framework | | Ruby Python  .NET  Java  PHP | Go  Java  PHP  Python | .NET  Java  Node  PHP  Python  Ruby | Java Ruby |
| Pricing | Machine CPU | $0.14 / hour | $0.10/ hour | $0.12/hour | 0.10$/hour |
| Storage | .25$/gb/month | 0.15$/gb/month | .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

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