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| --- | --- | --- | --- | --- | --- |
|  | | **Amazon AWS** | **Google App Engine** | **Microsoft Azure** | **IBM Smart Business Dev.** |
| **focus** | | Public cloud | Public cloud | Public cloud | Private cloud  Hybrid cloud |
| **Infrastructure and virtualization architecture** | | Uses XEN Para-Virtualization Architecture | Uses Google Computing Engine as infrastructure | Hyper-V virtualization on Azure Compute infrastructure | IBM Cloud Computing Reference Architecture is used for creating cloud components on cloud data centers |
| **Platforms** | | IaaS | PaaS | IaaS, PaaS | IaaS |
| **Persistent Storage** | | CouchDB  MongoDB  Microsoft SQL  MySQL | PostGreSQL | MongoDB  Oracle DB  Microsoft SQL  MySQL | MongoDB  MySQL  PostGreSQL |
| **Monitoring** | | Watch cloud | Google cloud API | Azure management portal | IBM smart cloud monitor |
| **Load Balancing** | | Automatic with Amazon EC2 instances | Automatic | Automatic based on the traffic | Random hydro dynamic balancing |
| **Message Queues** | | Uses queuing service of SQS | Uses Pull, Task, Push queue services | Uses Azure bus queue | Uses Web sphere message queue |
| **Development Tools** | | AWS management console, AWS Toolkit for eclipse, Visual Studio. | GAE SDK | SDK with Visual Studio | Rational software solutions, Web 2.0 |
| **Integration with other services** | | cloudfront , Simple DB, SQS, SS | GData ,GAE Database | .NET, SQL services ,live, | IBM cast iron interface |
| **Web APIs** | | Java,.NET | Translate, Endpoint | Provides RESTful web services | Cast iron live |
| **Programming Framework** | | .NET  Java  PHP  Python | Go  Java  PHP  Python | .NET  Java  PHP  Python  Ruby | Java  Node  Ruby |
| **Pricing** | **Machine CPU** | $0.085/hour to $3.16/hour | $0.10/hour CPU usage | $0.12/hour CPU usage | $0.12/hour CPU usage |
| **Storage** | Capacity:5GB to 1TB, $0.10/GB/month | $0.15/GB/month | $0.15/GB/month | $0.15/GB Monthly |
| **I/O** | For 1 million I/O requests, $0.10 | $0.10/hour | $0.10/hour | For 1 million I/O requests, $0.10 |
| **Bandwidth** | 15GB bandwidth | incoming $0.10/GB,  outgoing $0.12/GB | $0.10/GB incoming,  $0.15/GB outgoing | Bandwidth of 15GB |