|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Amazon AWS | Google AppEngin | Microsoft Azure | IBM Smart Business Dev. |
| focus | IaaS | PaaS | PaaS | IaaS |
| Infrastructure and virtualization architecture | OS level running on a Xen Hypervisor | Application container | OS level | Hypervisors |
| Platforms | Linux,Windows,  Amazon Linux,Cent OS,  Debian, Oracle Enterprise Linux,Red Hat Enterprise Linux, SUSE Enterprise Linux, Ubuntu, Windows Server | Linux Operating systems, Windows Server 2008 | Linux, Windows, Cent OS, Windows Server, Debian, Fedora | Linux, Windows |
| Persistent Storage | Elastic Block Storage(EBS),  Simple Storage Service(S3) | Gdisk – bulk storage. | Windows Azure blobs | IBM Persistent Storage |
| Monitoring | YES,  Real Time monitoring using Amazon Cloudwatch | App Engin System Status Dashboard. | MP – Management Pack | IBM Tivoli monitoring |
| Load Balancing | ELB: Elastic Load Balancing | Compute Engine Load Balancing, Automatic scale and Load balancing | 1. Windows Azure Load Balancer 2. Azure load balancer. | Hadoop MapReduce framework |
| Message Queues | Amazon Simple Queue Service(SQS) | Push Queues. | Windows Azure Queues, Service bus Queues | IBM Web Sphere MQ |
| Development Tools | Web console, Elastic Load balancing API, SDK’s for Java, PHP, Rails & Python, and several Eclipse Plugins. | Java plugin for Eclipse and Python software development kit (SDK) | Visual Studio,Microsoft .NET services, Microsoft Sharepoint services | IBM rational tools |
| Integration with other services | Yes. | Yes | Yes | Not Available |
| Web APIs | Yes | Yes | Yes | Yes |
| Programming Framework | Linux based Amazon Machine Image(AMI), Java, PHP, Python, Ruby, .NET | .NET, Go, Java, PHP, Python | .NET, Java, Node, PHP, Perl, Python, Ruby, C# | Java, Node, Ruby, C# |
| Pricing | $0.100 /GHz/hr | $0.100 /GHz/hr | $0.150/GHz/hr | $0.10/GHz/Hr |
|  | $0.055 /GB/Month | $0.150/GB/Month | $0.150/GB/Month | $0.150 /GB/ Month |
|  | $0.01 / 1000 operations | $0.01 / 1000 operations | $0.01 / 1000 operations | $0.01 / 1000 operations |
|  | $0.10 / GB | $0.10 / GB | $0.10 / GB | $0.10 / GB |