|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | | **Amazon AWS** | **Google App Engine** | **Microsoft Azure** | **IBM Smart Business Dev.** |
| **focus** | | General Public Sector | Rapid industry developments | Individual Public with easy application access. | Hybrid, fast &easy deployment or integration for startups. |
| **Infrastructure and virtualization architecture** | | EC2- Elastic Compute Cloud upon instantiate. | Specifications provided by Google | Servers at backend runs in windows which can be customized, while Azure in frontend runs in .Net | Virtual Machines Instances |
| **Platforms** | | Infrastructure as a Service(IaaS);  Unix & Windows Servers | Platform as a Service(PaaS) | Infrastructure as a Service(IaaS)  &  Platform as a Service(PaaS);  Microsoft Server 2008 | Infrastructure as a Service(IaaS);  Red Hat, SUSE & Windows |
| **Persistent Storage** | | EBS(Elastic Block Storage),  S3(Simple Storage Service) | Bulk Storage- Cloud MySQL, NoSQL | Standard Application Storage | Bulk Storage-independent of service |
| **Monitoring** | | Available(Cloud watch) | Available(Google Cloud monitoring) | Available(Azure Ops) | Available(IBM Smart Cloud) |
| **Load Balancing** | | Supports using Elastic Load Balance | Supports using Engine Load Balancing | Supports using Azure load balancer | Supports both dynamic & elastic load balancing |
| **Message Queues** | | SOS, SMS | Push Queues | Azure Data Queues | IBM Web Sphere Queues |
| **Development Tools** | | Amazon management console, Command line APIs, SDKs for Java, PHP, Python. | Java Plugins for Eclipse & Python SDKs, App Engine Platforms | Visual studio , .NET SDK & Azure SDKs | Almost all SDKs for all platforms. Eg. Java plugins for Eclipse. |
| **Integration with other services** | | All the services are designed to work together;  Eg: Dynamo DB | Highly supported with the public API’s like Maps, GPS, and Android Services etc. Almost everything for APP Engine. | Supported using .Net Service  Eg: Azure CDN | Highly supported with most of the services available within the Cloud itself. |
| **Web APIs** | | Supports | Supports | Supports | Supports |
| **Programming Framework** | | Customizable Linux based Amazon Machine Image(AMI) | Python, java Beans, PHP, Impala | ASP .NET, Java, Ruby | Most of the Programming languages like Java, PHP, Node JS, Ruby etc. |
| **Pricing** | **Machine CPU** | $0.12/hr. | $0.10/hr. | $0.11/hr. | $0.10/hr. |
| **Storage** | 0.25 GB/month | 0.15 GB/month | 0.15 GB/month | 0.15 GB/month |
| **I/O** | $0.1/1000 service Requests | $0.1/1000 service Requests | $0.1/1000 service Requests | $0.1/1000 service Requests |
| **Bandwidth** | $0.10 / GB for Avg IN & OUT | $0.10 / GB for Avg IN & OUT | $0.10 / GB for Avg IN & OUT | $0.10 / GB for Avg IN & OUT |

**By**

Srikar Reddy Mallareddygari

ID# 33