



Comparing Cloud Services

Shivani Bhalchandra

Rohit Chandra

Danish Siddiqui

Ahmet Bahcivav

Load Balancing

	Protocols	IPv6 Support	Health Checks	Availability	Metrics
AWS	HTTP, HTTPS, SSH, TCP, TLS (NO UDP)	Classic LB supports, Application, Network does not	Yes	Ensures High Availability through Zonal Fail-overs	Supports Cloud Watch Metrics
Azure	HTTP, HTTPS, SSH, TLS, UDP, TCP	Supports IPv6 connectivity all the way to native IPv6 end-points	Yes	Ensured through Automatic Scaling	Not Specified in the docs
Google Cloud	HTTP, HTTPS, SSH, TLS, UDP, TCP	Supports IPv6 clients with HTTP(S), SSL Proxy and TCP Proxy	Yes	Ensured through Seamless Autoscaling and dynamic Health Checks	Integration with Google Analytics

Load Balancing

	Azure	AWS	Google Cloud
Name of the Service	Azure Load Balancer	Elastic Load Balancing	Google Cloud Load Balancer
Types	<p>Load Balancer :Layer 4</p> <p>Application Gateway Application level routing and Load balancing</p> <p>Traffic Manager : Offers 4 ways of traffic routing</p> <ol style="list-style-type: none">FailoverPerformanceGeographyWeighted Round-Robin	<p>Classic Load Balancer: Layer 7 and Layer 4</p> <p>Application Load Balancer: Layer 7</p> <p>Network Load Balancer: Layer 4</p>	<ol style="list-style-type: none">1. Cloud Load Balancer:2. HTTP(S) Load Balancer: Global load balancing for http(S) requests to the application3. Network Load Balancer: Balances the load of systems based on IP protocol data4. Internal Load Balancer: Enables the user to run and scale behind private load balancing IP addresses and it is accessible only to Virtual Private Cloud



Auto Scaling

	Azure	AWS	Google Cloud
Name of the Service	<ul style="list-style-type: none">• Auto Scale.• Manual and Auto mode for configuration• Scale Sets• Virtual Scale Sets	Auto Scaling	Autoscaling Groups of Instances
	<ul style="list-style-type: none">• Offers configurable VM instances based on Service Rules in VNET• Number of VM instances can automatically increase or decrease based on demand or schedule	<ul style="list-style-type: none">• Offers monitoring and auto adjusting capabilities of applications• Allows to configure performance metric to autoscale instances• Cost Efficient as no additional cost for scaling	<ul style="list-style-type: none">• Manages autoscaling through Managed Instance Groups• Manager Instance Group is a pool of homogeneous instances• Facilitates applications to handle influx of traffic gracefully• Need to specify autoscaling policy and target utilization for autoscaling



Serverless Computing

Amazon Web Services

- AWS Lambda
- Supports various runtime environments NodeJS, Python, Java and C#.
- Supports features like request chaining and edge processing.

Google Cloud Computing

- Google Cloud Functions
- Supports only one runtime environments NodeJS.
- Provides serverless execution environment for building and connecting cloud services



Serverless Computing

Microsoft Azure

- Microsoft Azure Functions
- Supports runtimes including JavaScript, C#, Python and PHP. .
- Provides a functional IDE in their portal to help you prototype and deploy functions.
- Similar to AWS Lambda