

Network:

There are four types of internet connectivity needed for accessing the cloud

- Basic Public Internet
- The Accelerated Internet
- Optimized Internet Overlay
- Site-to-Site VPN

1. Basic Public Internet:

The public Internet is the most basic choice for cloud connectivity.

This is the type of access that you buy from an Internet service provider (ISP) and Connect with via broadband or dial-up, based on your location.

Advantages of Basic Public Internet:

- There's a large audience. Anyone with Internet access can use this solution.
- It's highly fault tolerant.
- Many provider options are available.
- Secure Sockets Layer (SSL)–based, Hypertext Transport Protocol Over Secure Sockets Layer (HTTPS), encrypted access provides confidentiality.
- It's cost-effective.

Disadvantages of Basic Public Internet:

- Lack of end-to-end quality of service (QoS), thus making end-to-end service-level Agreements (SLAs) difficult to reach.

- Probability of poor response over high-latency connections.

There are no extras like Transmission Control Protocol (TCP) acceleration, advanced compression,

or application-specific optimization

- Downtime that might be out of your control (cable cuts, problems at the ISP, and so on).

2.The Accelerated Internet:

Accelerated Internet Access is a service that uses various software techniques to speed up the delivery of web pages to your web browser.

Service providers:

AT&T Hosting, Citrix NetScaler, F5's Web Accelerator

Advantages:

- Cloud improvement can increase by 20% to 50% from server.
- Better performance in SSL and TCP connection management
- Dynamic caching and compression techniques are used from end user side so 50% performance increase for end users

Disadvantages: Cost is high compare to basic public internet

3. Optimized Internet Overlay :

An optimized Internet overlay approach allows customers to access the cloud via the public Internet, but enhancement occurs on the provider's cloud.

Advantages :

- Optimized real-time routing. This helps avoid slowdowns, helping to make SLAs Easier to attain.
- An SSL session can be stopped so that protocols and payload can be optimized and re-encrypted.

- Consistent performance
- Content that is frequently accessed can be delivered from local caches.

Disadvantages

- It is costlier than public Internet connectivity, sometimes as much as four times as much.
- Limited provider options
- Provider risk

4. Site to site VPN:

The fourth option is to connect to the service provider directly using a private wide area network (WAN) (normally an MPLS/VPN connection).

Advantages :

- Confidentiality is very high
- High bandwidth
- SLAs for availability
- Lowest latency
- Less packet loss.

Disadvantages :

Private WANs are not normally more reliable than Internet connections

One mark Questions

Bandwidth : The transmission speed or throughput of your connection to the Internet.

Up stream : which refers to data transferred from a end user to server .

Downstream : which refers to data transferred from a server to a end user

Symmetric Connection in Up stream/ Down stream : If your connection with the cloud is symmetric, then that means you are sending and receiving data at the same rate.

asymmetric Connection in Up stream/ Down stream : If your connection is asymmetric, then data is sent from your organization at a slower rate than you're receiving it.