



SNS COLLEGE OF ENGINEERING

Kurumbapalayam (Po), Coimbatore - 641 107

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Performance Considerations

Describes specific performance-related areas that are particularly important to consider for cloud-based solutions compared to on-premises solutions.

CDN Settings: A content delivery network or content distribution network (CDN) ensures high availability when serving content to visitors. A CDN consists of a globally distributed network of proxy servers deployed in multiple data centers. CDNs deliver content from the fastest and closest server available. The CDN servers are designed to cache content according to the cache rules you define in the HTTP headers from your application. You must set these caching rules correctly for your solution to scale properly.

Site startup: proper site warm-up is crucial for cloud-based environments. Because a node may be brought out for maintenance at any time and put back in during peak hours a node that gets a full share of traffic without being warmed up first will cause response-time spikes and increase the risk of outages. The warm up feature automatically starts and initializes a web application to prepopulate the server and data caches.

Limiting the number of content types is a good practice. startup scans assemblies and caches view,

Output cache: Cloud-based solutions are more likely to scale out the web servers rather than to scale them up. This means that each front-end node also contributes to a constant load to the database. In other words if you go from two front end servers to four end servers while keeping the total throughput the same the load on the database server increases.



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when scaling out be sure that the machines that spend the most effort building a page are the front end servers. Caching in multiple layers help avoid a "cache stampede," especially when combined with a warmup

Entity tags (ETags):

The ETag or Entity Tag is part of the HTTP protocol and determines web cache validation. See CDN recommendations for information about using ETags.

Resilience:

In a cloud environment retry policies become increasingly important. Transient errors may occur due to network issues or maintenance of infrastructure elements, and retry policies let the application gracefully recover from such error without propagating the error to the end user.

Retry mechanism for Azure service differs because each service has its requirements and characteristics. Each retry mechanism is tuned to a specific service.

Storage:

Because virtual machines hosting a web app may be restarted any-time you risk losing any information stored in the file system. Also if you have large media volumes, you should store assets in a BLOB storage instead of in the web app because this limits scalability. Optimizely provides access to BLOB storage through a BlobProvider interface.