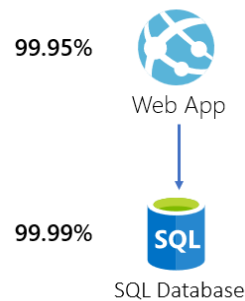Often in projects we come across situations we want to ensure if our Availability SLA were right. How do you ensure that there is enough Availability SLA for your applications? These are nice tips to understand or arrive at the total SLA for site. The tips here is contextualized around Azure cloud services.

1. *When the services are in Serial, the combined SLA is less than the individual SLA.*
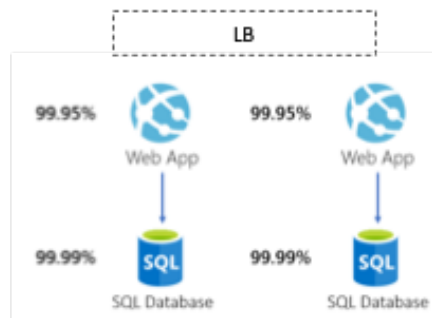

Let us look at the above figure for reference. There is Azure App Services Web App. It has an SLA of 99.95% while SQL Server has an SLA of 4 9s. The combined SLA is computed as
$P (A \cup B) =$

$$P (A \cap B) = P(A) * P(B) = 99.95 * 99.99 = 99.94\%$$

2. *When the services are in Parallel, the combined SLA is more than the individual SLA.*

$$P (A \cup B) = 1 - P(\neg A \cap \neg B)$$

$$P (A \cup B) = 1 – (1 - 99.94) * (1 – 99.94)$$
$$P (A \cup B) = \mathbf{99.9966\%}$$

By scaling out, the architecture becomes more Availability with the impact on cost.

The below link is a great asset for understanding SLA provided by Azure services.
https://azurecharts.com/sla.