In term of monitoring we should consider two different domain, resource monitoring and application level service monitoring.

1. Resource Monitoring
   1. It is brilliant that the encryption and decryption of SSL are CPU intensive and can put a strain on server resources. So, the most significant metric in resource monitoring is CPU utilization.
   2. The next most important metric is RAM due to that the mentioned server have the role of object caching to offload static content delivery.
   3. Third metric that we should consider is network usage on both two NICs bandwidth in both zones, Clients to Front-end and Server connected to the Back-end.
   4. Due to the server role, there is no need to monitor Hard Disk statistics, but if you have license without any sensor limitations, so you can even add Disk I/O statistics or Storage Usage. But it`s clear that due to server role, monitor the storage is not mission critical.
   5. Many hardware platforms support redundant power supply, so it will be beneficial if we could monitor power supply conditions. To detect failure of any power supplies.
   6. Finally, some vendors can provide environmental condition data, for example CPU and board temperature, FAN status, etc. it could be a chance to prevent hardware damage.
2. Application level service monitoring
   1. Front-end and Back-end session: The number of sessions currently open
   2. Front-end and Back-end session rate: The rate of creation of new sessions
   3. Front-end and Back-end HTTP responses
   4. Queue Size

**Monitoring Challenges**

1. Collecting metrics: to collect the metrics, there should be an agent (embedded or installed agent). In some cases, we have vendors that they are provided embedded agent for example SNMP agent to send MIB information via SNMP protocol. As a matter of fact, SNMP provided information could be limited just to resource monitoring. In other cases, some plugins or APIs must be used to collect the other desired metrics. In some cases, installing new plugins may be a challenge.
2. Integrate all gathered data in a central management dashboard is really challenging. On the other hand, in many situations discovering the root cause of a service outage is really tough task without correlation between collected data.