Cloud Environment:

- Since the architecture that I am using is Microservice Architecture and personally I am a little too inclined towards AWS more as compared to GCP and Azure. I would prefer using AWS. AWS offered a lot of services. The services that I would like to use are **Amazon CloudWatch**, **AWS X-Ray**, and **AWS CloudTrail**. **AWS CloudWatch** provides you with Collecting Logs, Monitoring, Analyze Logs and Metrics in real time and even more it gives you compliance and security as CloudWatch is integrated with AWS Identity and Access Management (IAM) so you can control which users and resources have permission to access your data and how they can access it. **AWS X-Ray** aids to identify performance bottlenecks, edge case errors, and other hard to detect issues. X-Ray supports applications, either in development or in production, of any type or size, from simple asynchronous event calls and three-tier web applications to complex distributed applications built using a microservices architecture. This enables developers to quickly find and address problems in their applications and improve the experience for end users of their applications. **AWS CloudTrail** lets you record APIs activity on our AWS account. Since one single platform can offer loads of services in one place AWS is a great option to go for.
    - Yes there exist more cloud providers such as **GCP** and **Azure** which offer a lot of services too but what I and my knowledge gained from my known connections have seen that a lot of the companies are more inclined towards AWS as compared to other one reason being AWS being the first one to come into cloud computing and also maintaining easy to understand services and continuous new feature additions. If I had to choose someone on the **second place** I would go for **Azure**, it has Azure Monitoring which lets you benchmark, log, monitor etc and yes I will put **GCP** at the end because not only it came a little late in this market and isn't the first choice for a lot of companies either but also personally I find it a little tough to work with.
- Apart from these cloud tools there also are third party tools that are always there at our disposal such as **Apache JMeter** or **Gatling** for **Benchmarking**. **Elastic Stack (ELK)** or **Splunk** for **centralized log management**. **Datadog**, **New Relic** or **AppDynamics** for **performance monitoring** and **VictorOps** or **OpsGenie** for **system health alerts**.

Bare-Metal Environment: Since I have not used Bare-Metal Environment tools a lot, most of my information I could gather by going through docs on Google and surfing Youtube Channels.

- Benchmarking: Tools like Apache Benchmark, Siege are available for load testing.
- Logging: In case of microservices we have frameworks like Log4j, Logback which are Integrate logging frameworks.
- Monitoring: Prometheus is one of the monitoring agents to gather system and application metrics.
- System Health Alerts: Here too we have monitoring tool alerts where we can configure alerts within our chosen monitoring tools for example being Prometheus Alertmanager.

As of now Cloud- Environments are highly recommended as for Bare-Metal environment has issues such as scalability, infrastructure management and initial investment which are taken care extensively by Cloud Environment although there are advantages of Bare-Metal Environment too as it gives provides better performance, lets you have full control over the hardware and it also strong isolations between workloads, reducing the risk of interface from other tenants.
The choice between a cloud environment and a bare-metal environment depends on various factors, and there is no one-size-fits-all answer. Both options have their advantages and disadvantages, and the decision should be based on the specific requirements of your project, business goals, and technical considerations.

Limitations on Google Sheets: