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# CLOUD COMPUTING

## SLA - Tutorial

PROF. SOUMYA K. GHOSH

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

IIT KHARAGPUR

# What is Service Level Agreement?

- A formal contract between a Service Provider (SP) and a Service Consumer (SC)
- SLA: foundation of the consumer's trust in the provider
- Purpose : to define a formal basis for performance and availability the SP guarantees to deliver
- SLA contains Service Level Objectives (SLOs)
  - Objectively measurable conditions for the service
  - SLA & SLO: basis of selection of cloud provider

# Problem-1

Cloud SLA: Suppose a cloud guarantees service availability for 99% of time. Let a third party application runs in the cloud for 12 hours/day. At the end of one month, it was found that total outage is 10.75 hrs.

Find out whether the provider has violated the initial availability guarantee.

# Problem-2

Consider a scenario where a company X wants to use a cloud service from a provider P. The service level agreement (SLA) guarantees negotiated between the two parties prior to initiating business are as follows:

- Availability guarantee: 99.95% time over the service period
- Service period: 30 days
- Maximum service hours per day: 12 hours
- Cost: \$50 per day

Service credits are awarded to customers if availability guarantees are not satisfied. Monthly connectivity uptime service level are given as:

Monthly Uptime Percentage	Service Credit
<99.95%	10%
<99%	25%

However, in reality it was found that over the service period, the cloud service suffered five outages of durations: 5 hrs, 30 mins, 1 hr 30 mins, 15 mins, and 2 hrs 25 mins, each on different days, due to which normal service guarantees were violated. If SLA negotiations are honored, compute the effective cost payable towards buying the cloud service.

# Thank You!