

# USU Operation System – Quality Requirements

Attribute	Description	Metric / Target
Performance	The system shall process event creation and publication within a reasonable time to ensure responsiveness during high traffic.	Average response time less than 3 seconds under 500 concurrent users.
Availability	The system must be operational during student union activities, allowing uninterrupted coordination between institutions.	Uptime more than 99.5% of the time during academic periods.
Security	Only authenticated and authorised USU officers can perform create/update/delete operations. All API calls must be encrypted.	All admin endpoints must be protected with encryption.
Reliability	Announcements and event updates must not be lost or duplicated even during network interruptions.	0% data loss in transactions; retries enabled for failed API calls.
Scalability	The system shall scale horizontally to handle multiple universities without performance degradation.	Linear performance up to 10 times load increase.
Maintainability	The codebase must allow easy deployment of updates to subsystems (operation, management, student app) without service interruption.	Mean Time to Deploy less than 10 minutes.

## Justification:

Since the USU Operation System acts as the federation-level control platform, its main quality requirements concern reliability, security, and availability. These make sure consistent coordination among universities and prevent data loss during national event publication or modification.

