Iteration 3: Address Quality Attribute Scenario Driver

In Iteration 3, we focus on quality attributes and any potential issues that may arise and possible prevention methods.

Step 2: Establish Iteration Goal by Selecting drivers

We focus on addressing QA-3: Availability. The system should be available at all times. The system should only be down for maintenance. Maintenance should be announced and users should be notified well in advance.

Step 3: Choose One or More elements of the System to refine

We will be working with the Application and Database server.

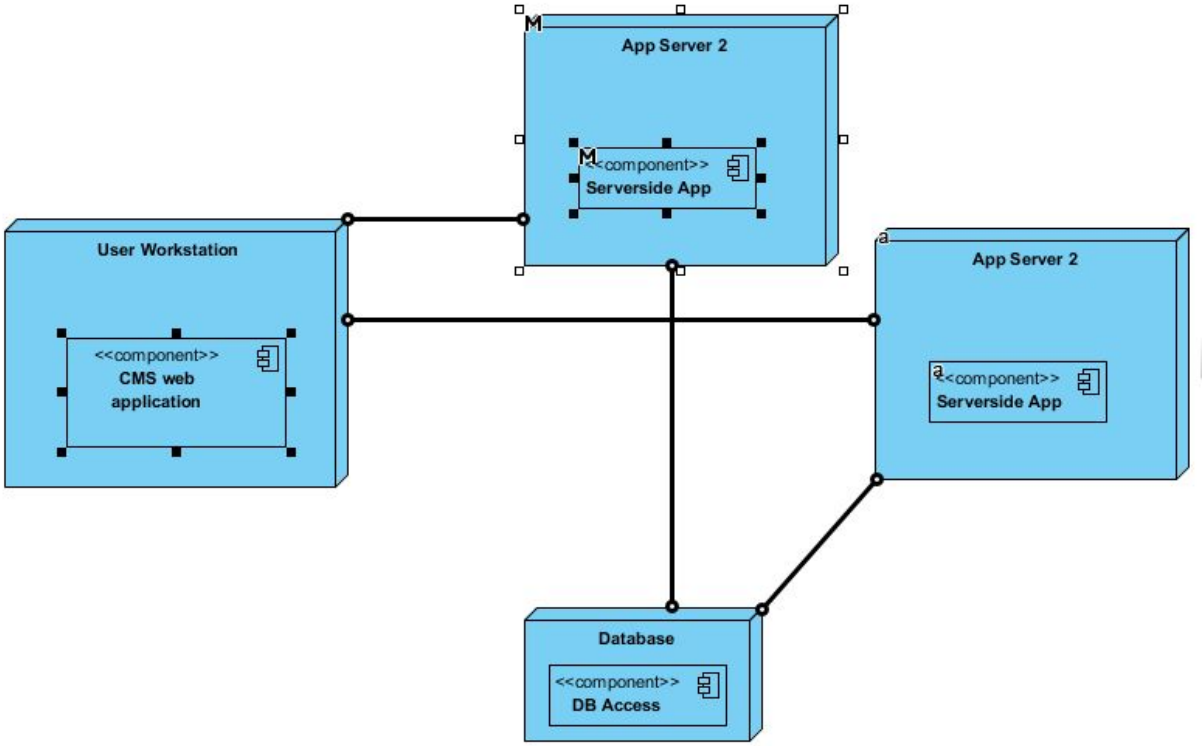
Step 4: Choose One or More Elements of the System to Refine

Design Decisions and Location	**Rationale and Assumptions**
Introduce **active redundancy** tactic by replicating the application	This will allow the system to minimize the damage of a system failure by rapidly loading the last backed up version of the system.
Introduce **active redundancy** tactic to database	This will allow the database to be backed up at all times. In the event of a failure, there will always be a backup.

Step 5: Insatiate Architectural Elements, Allocate Responsibilities

Design Decisions and Location	**Rationale and Assumptions**
Use archived backups	This allows an archived version of the server to be accessible whilst the live servers are down for maintenance.
Implement checksum method to database	This will keep the data safe during transition process in between the server. If a file was to get compromised, the system would know and prevent further damage to the system.

Step 6: Sketch Views and Record Design Decisions.



Refined deployment diagram

Two servers help with the availability issue when one is down

Step 7: : Perform Analysis of Current Design and Review Iteration.

Not Addressed	**Partially Addressed**	**Completely addressed**	**Design Decisions Made During the Iteration**
		UC1	No relevant decision made.
	UC2		No relevant decision made.
	UC-3		No relevant decision made.
		UC-4	No relevant decision made.

		UC-6	Checksums will be implemented into the database to avoid corruption and compromising the integrity of the server if file has been compromised.
	QA-1		Better management of the database allows for better overall performance.
		QA-3	Dual server assists with availability
		QA-6	The usability of the system is not affected as all decisions will occur behind the scenes.