

Assignment 1 – Requirements Management and Network Design

Option 2

Project Scope

You are responsible for the System Design Phase of a new project being proposed by the CEO of Health Data Systems Inc. (HDS). The initial Requirements Analysis has been conducted and agreed to by the Project Sponsor and Project Manager. You, in your capacity as Senior Systems Analyst, have been tasked with developing a Network Diagram and proposing a solution for creating a new ER Registration System (ERRS) that will allow patients to register online prior to arriving at the hospital emergency room. The system is intended as a general “Queue” for patients and nurses to Triage patients and to provide the potential time before the patient is likely to be seen by a doctor based on the patients’ symptoms and the number of patients already in the “Queue”.

The System Requirements are as follows:

1. The new ER Registration System should maintain a history of patients, symptoms and time from registration to when they are seen by a doctor.
2. The ER Registration System should be a live “Queue” and patients should be ordered by “symptom severity” and time already in the queue. “Symptom severity” will be based on a list provided by a specialist clinician e.g. if a patient has a nominal fever vs a patient who has stroke symptoms, the latter patient will have a higher “Symptom severity” rating
3. There should be an Operational Database deployed to handle all the data collected when a patient registers e.g. Health Card Number, Symptoms, and current medications.
4. A reporting server is required to provide monthly patient wait times and count.
5. The new ER Registration System should leverage existing data being collected via web services (api - XML) currently available :
 - a. STAR (Patient Admission, Transfer and Discharge)
 - b. HSM (Nursing software to determine patient diagnoses)
6. There should be a dedicated server to manage Backups.

Assignment 1 Submission

Please provide via BrightSpace the following documents and information:

Project Details

1. **Introduction describing the proposed solution (5 pts)**
2. **Rationale for the proposed solution (include a benefit and risk) (10 pts)**
3. **Servers Listed with (15 pts)**
 - a. CPU requirements with a paragraph on rationale
 - b. Memory requirements with a paragraph on rationale
 - c. Storage requirements with a paragraph on rationale
 - d. Software requirements with a paragraph on rationale
 - e. Anticipated costs for Hardware and Software
4. **Network Diagram (20pts)**

Network Details

The Network Diagram should include the following information, *inter alia*:

- a. IP Addresses, Subnet Masks, Default Gateways
- b. Links to other servers/services
- c. Firewalls/DMZs if necessary (non-Cloud)
- d. Ports and Port forwarding
- e. Server Names and local Services e.g. DHCP, Database, Web Services etc.

You should submit two documents in BrightSpace:

1. Project Details in MS Word format
2. Network Diagram in png format (please ensure that the image is in at least 200dpi resolution so that your results are clearly viewable)

The deadline for this Assignment is Sunday, 3rd October at midnight. We will work on it during class. Please feel free to ask as many questions as you may require to better understand the requirements.

Note: If you are not able to use MS Visio to create the Network Diagram, please use the following free tool: draw.io