



NETWORK DESIGN TEAM

(325)

REGIONAL 2023

Topic

Tech Stadium is a new tech company specializing in implementing new networks for high demands in sporting events across the United States. They are multiplying quickly; they are seeking new companies to help complete some of the upcoming work, specifically for ballparks across the United States. Tech Stadium is located in Los Angeles, California, and expanding across the US. Your company has just been contracted to assist with the planning, developing, installing, and maintaining of a new network system within the stadiums and ballparks.

Tech Stadium has accepted contracts on implementing the computer network systems, specifically in baseball stadiums. These baseball stadiums are positioning themselves to attract baseball teams just like the professional leagues worldwide. The stadiums are being either remodeled or built to specifications in the following cities: Arlington, Texas, Kansas City, Missouri, and New Orleans, Louisiana.

These stadiums will be state-of-the-art, one-of-a-kind four-story structures with seating and experiences on each level. The board of directors' opinion is fans want to experience more than just the live action of the game. Fans are looking for mobility and screen experience through mobile devices and televisions and the fun happening on the field.

There will be 48 concessions or restaurants and 150 vendor booths on the scattered levels of the ballpark, and four leading gift shops for merchandising. These venues will be private businesses subcontracted by the ballparks to provide services. Each vendor will need to have connections and secure access to their networks for point-of-sale systems. Each location will have four point-of-sale systems, with the ballpark providing the primary Internet connection. Additionally, each concession stand and the vendors will need to implement a dual 65" digital menu solution and a solution for management in a centralized data center.

Through the concourses of the 4-story building, there will be 192 televisions to broadcast the game. The marketing department will need a solution for several digital touch screen kiosks, which will be connected to the network with Wi-Fi, for feedback and user experiences scattered throughout the building.

There will be 50 suites available for fans to purchase. These suites will need television access the game's broadcast, the live play on the field, and Wi-Fi for electronic online kiosk menu ordering and guest access to the Internet to keep up with game stats. Fans in the stands need a strong Wi-Fi connection as well. They can purchase food, beverages, and menu items directly from the mobile app and keep stats along with the game.

Each stadium will have a ticketing office, business office, marketing, and sales department. These offices will need fast, reliable computers, a telephone solution, and a centralized and redundant data storage network. They will need a solution for office software servers to house their bookkeeping, client sales database, and ticketing software for at least 15 staff members in each department. The closed-circuit television station on-site will need a solution to store all the

game footage. Each stadium will need a solution to provide reliable, high-speed, and accessible access to their video footage and game data so replay officials and players in the dugouts can have access to the material ready to go. Security and IoT in today's world are essential. Safety is of the utmost importance to protect networks, the public, and workers in the stadium. Use of technology can improve our understanding of providing solutions for physical protection to the facility as well.

Needs of a Tech Stadium's Network Plan

- High-speed, high-performance, secure internal network access for concessions, gift shops, and vendors.
- Solution for digital menu signage and centralized datacenter.
- High-speed, high-performance guest network access for mobile app and ordering experience.
- High-speed, high-performance, secure internal Wi-Fi to support in-game tablets for analysis and game footage for review.
- TVs and cabling for local broadcasting entertainment of the closed-circuit internal TV broadcast.
- An entire network and computer solution for business and ticketing offices.

Teams who do *not* submit an entry following this topic will be *disqualified*.

Notes to Judges:

Proposed solutions and presentation should:

- Provide a reasonable and reasonably priced, yet comprehensive, network design.
- Address the needs for a stadium listed in the Tech Stadium's Network Plan.
- Take into consideration innovative approaches to modern technology and availability.

JUDGING PROCEDURE

- As a team of judges, formulate two to three questions to ask at the conclusion of the presentation. Be sure to ask the same questions of each team.
- No more than three (3) minutes for set-up.
- The length of the presentation will be no more than ten (10) minutes; followed by judges' questions not to exceed ten (10) minutes.
- The presentation will be stopped at ten (10) minutes.
- Excuse teams upon completion of judges' questions.
- **There can be no ties in the top ten (10) teams.** It is the responsibility of the judges to break any ties.
- Administrator will fill out ranking sheet prior to dismissing the judges.
- If more than one (1) section is necessary, finalists will be determined by selecting an equal number from each section.
- Give administrator all Judges' Rating Sheets, Judge Evaluation Sheets, and contest materials.
- No audience is allowed in the contest room.

Please double-check and verify all scores!