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RAMRAO ADIK INSTITUTE OF TECHNOLOGY
NAVI MUMBAI

Department of Information Technology

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Assignment No: 01

Subject: Network Design Lab

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Class/Batch: A/A2

Date of Performance:

Date of Submission:

Grade:

Signature:

Q.1 steps for identifying req. for network design.

Ans As the organization's network grows, so does the organization's dependency on the network and the applications that use it. Network-accessible organizational data and mission-critical applications that are essential to organizations operations depends on network availability. After gathering all customer requirements, the designer must identify and obtain any missing information and reassess the scope of design project to develop a comprehensive understanding of customer's need.

Extracting initial requirement: Initial design requirements are typically extracted from the (RFP) documents that the customer issues. An RFP is a formal request to vendors for proposals that meet requirements that the document identifies. The first step in the design process should be pre-documentation the requirements and reviewing them with customer for verification and approval, obtaining direct customer input.

Gathering Network Requirements: The process of gathering requirements can be broken down into five steps. During these steps, the designer discusses the project with customers staff to determine and gather the necessary data.

Planned Application and Network Service: The designer must determine which applications the customer is planning to use and the importance of each of these applications. Using a table helps organize applications and services planned

Organizational Goals: Every design project should

begin by determining the organizational goals that are to be achieved. the criteria for success must be determined, and the consequences of a failure understood. Network designers are often eager to start by analysing goals before considering the organizational goals and constraints

Q.2 Analyze how modular approach is beneficial for network design

Ans A module is a component of a composite structure, modular network design involves creating modules that can then be put together to meet requirements of entire network. modules are analogous to building blocks of different shapes and sizes; when creating a building, each block has different functions The block might be used in multiple places, saving time and effort in overall design and building process As when used for a building, a modular design for a network has many benefits, include following

(1) It is easier to understand and design smaller, simpler modules rather than an entire network

(2) It is easier to troubleshoot smaller elements compared to entire network

(3) the reuse of blocks saves design time and effort as well as implementation time and effort

(4) The reuse of block allows the network to grow easily, providing network scalability

(5) It is easier to change modules rather than the entire network, providing flexibility of design

Q.3 Design a campus network and a data center Network for hospital

Ans Gathering Network Requirements

(1) The network should stay up all a few requirements for their network

(2) The network should reliably deliver applications and provide reasonably good response time from any host to any host

(3) The network should be secure, it should protect the data that is transmitted over it and data stored on device should that connect

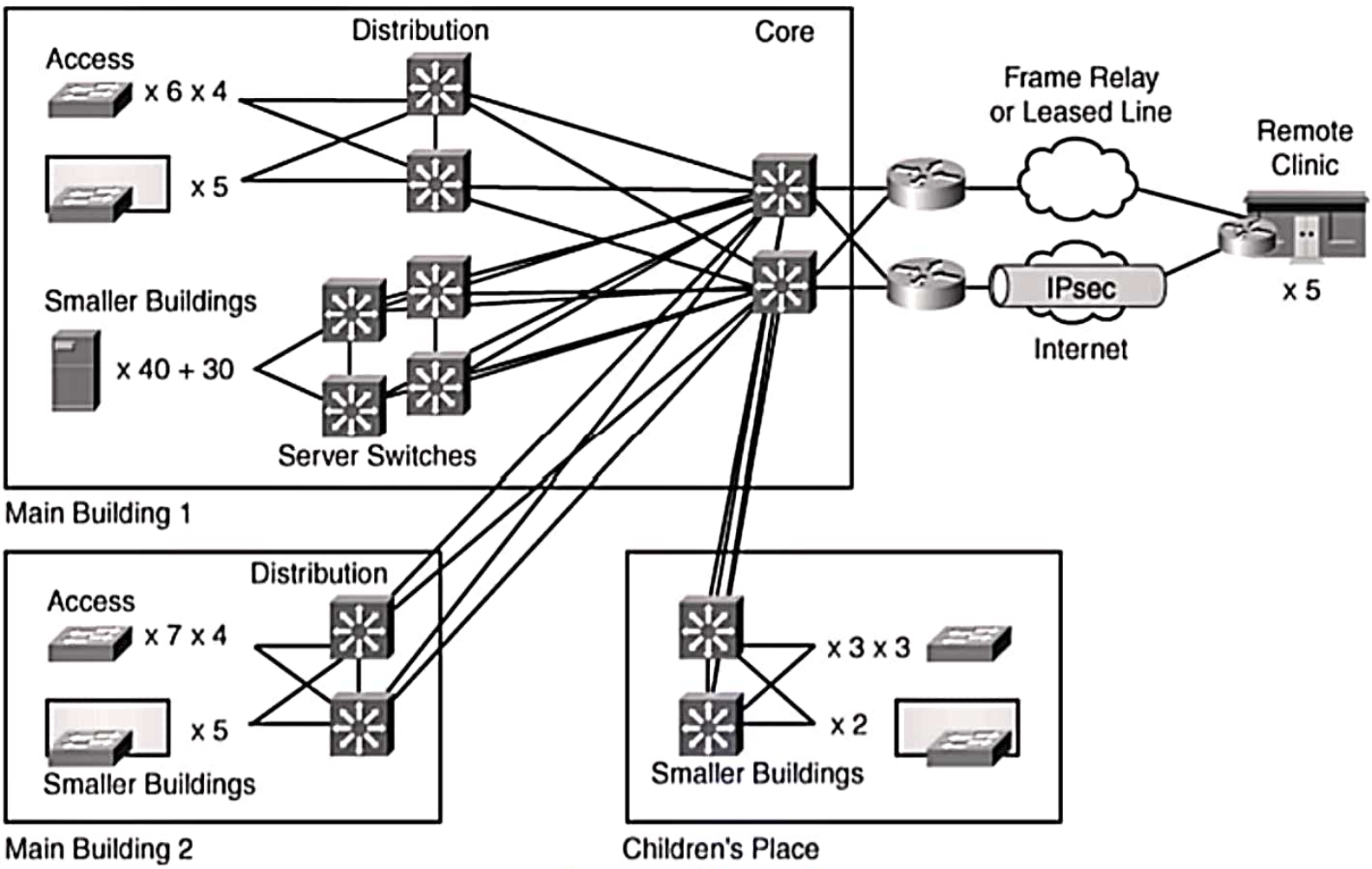
Fundamental design goal

(1) Scalability: scalable network design can grow to include new user groups and remote sites and can support new applications without impacting the level of service delivered to existing users.

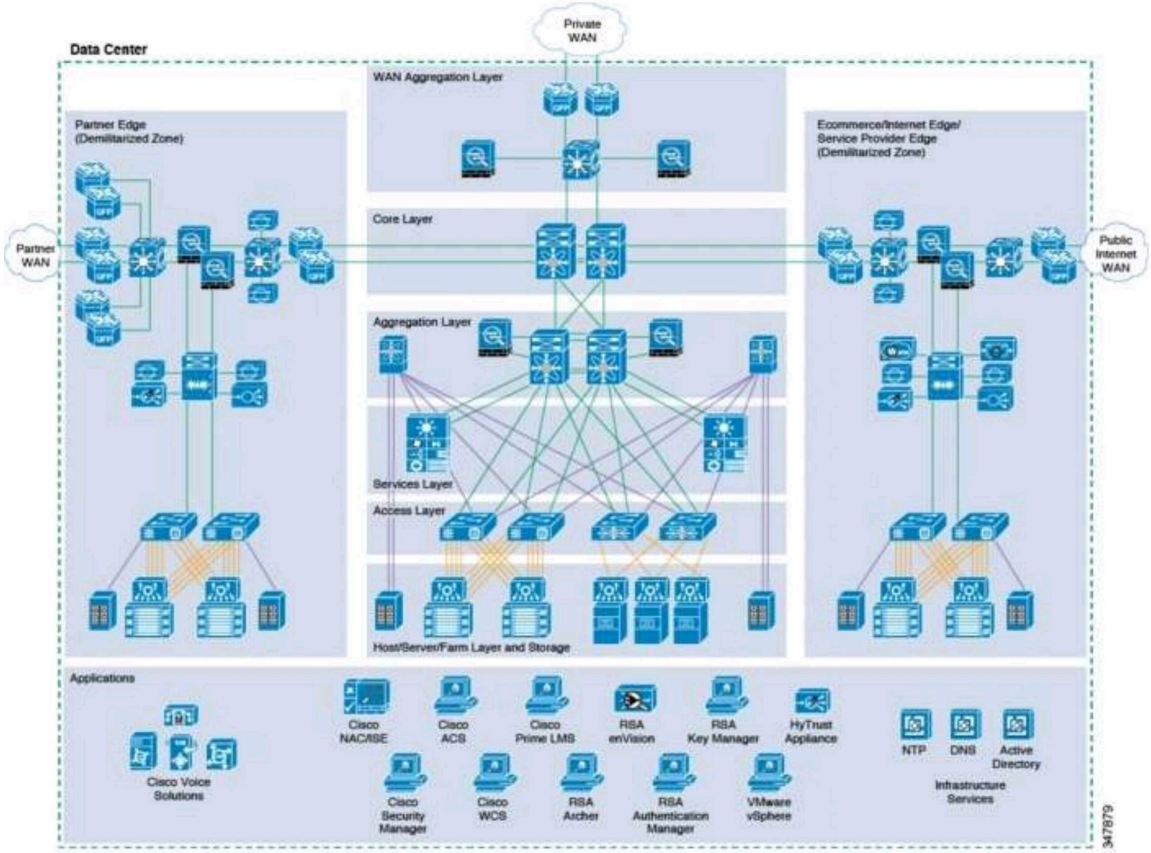
(2) Availability: A network designed for availability is one that deliver consistent, reliable performance

(3) security: security is a feature that must be designed into the network, not added on after the network is complete

(4) manageability: No matter how good the initial network design is, the availability network staff must be able to manage and support network.



Campus Network



Data Centre Network