RESOURCE SHARING BY COMPUTER NETWORKS

Dr. Surender Singh

Assistant Professor

Department of computer science

Government First Grade College, Chitguppa

Dist: Bidar Karnataka

Abstract:- In computing, a shared resource, or network share, is a computer resource made available from one host to other hosts on a computer network. It is a device or piece of information on a computer that can be remotely accessed from another computer transparently as if it were a resource in the local machine. Network sharing is made possible by inter-process communication over the network.

The term *file sharing* traditionally means shared file access, especially in the context of operating systems and LAN and Intranet services, for example in Microsoft Windows documentation. Though, as BitTorrent and similar applications became available in the early 2000s, the term *file sharing* increasingly has become associated with peer-to-peer file sharing over the Internet.

I. INTRODUCTION

A network share can become a security liability when access to the shared files is gained by those who should not have access to them. Many computer worms have spread through network shares. Network shares would consume extensive communication capacity in non-broadband network access. Because of that, shared printer and file access is normally prohibited in firewalls from computers outside the local area network or enterprise Intranet. However, by means of virtual private networks (VPN), shared resources can securely be made available for certified users outside the local network.

A network share is typically made accessible to other users by marking any folder or file as shared, or by changing the file system permissions or access rights in the properties of the folder. For example, a file or folder may be accessible only to one user, to system administrators, to a certain group of users to public, i.e. to all logged in users. The exact procedure varies by platform.

In operating system editions for homes and small offices, there may be a special pre-shared folder that is accessible to all users with a user account and password on the local computer. Network access to the pre-shared folder can be turned on. In the English version of the Windows XP Home Edition operating system,

the preshared folder is named Shared documents, typically with the path *C:*\Documents and Settings\All users\Shared documents.

VISION AND CONCEPT

In home and small office networks, a decentralized approach is often used, where every user may make their local folders and printers available to others. This approach is sometimes denoted a Workgroup or peer-to-peer network topology, since the same computer may be used as client as well as server.

In large enterprise networks, a centralized file server or print server, sometimes denoted client–server paradigm, is typically used. A client process on the local user computer takes the initiative to start the communication, while a server process on the file server or print server remote computer passively waits for requests to start a communication session.
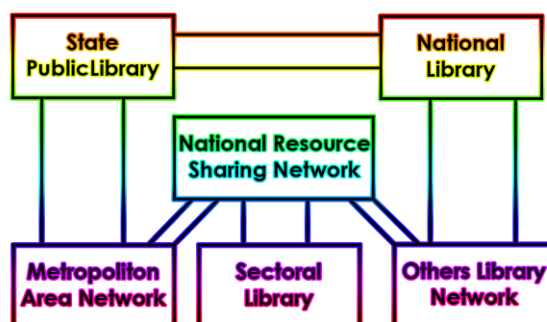
In very large networks, a Storage Area Network (SAN) approach may be used.

Online storage on a server outside the local network is currently an option, especially for homes and small office networks.

Shared file access involves but should not be confused with file synchronization and other information synchronization. Internet-based information synchronization may, for example, use the SyncML language. Shared file access is based on server-side pushing of folder information, and is normally used over an "always on" Internet socket. File synchronization allows the user to be offline from time to time and is normally based on an agent software that polls synchronized machines at reconnect, and sometimes repeatedly with a certain time interval, to discover differences. Modern operating systems often include a local cache of remote files, allowing offline access and synchronization when reconnected.

Some examples of shareable resources are computer programs, data, storage devices, and printers. E.g. shared file access (also known as disk sharing and folder sharing), shared printer access, shared scanner access, etc. The shared resource is called a shared disk, shared folder or shared document.

RESOURCE SHARING AND INFORMATION NETWORKING

Resource Sharing and Information Networking both are dependable on each other to fulfill the demand of the institutional users. Resource sharing means the existing resources in a comparing system can be accessed or men remotely accessed across multiple administrative domains. Resource sharing is not a new concept in the fields of libraries. The concept was identified by the term of library co-operation. The term "Resource Sharing" is necessary because any library or information centers can share their resources

including the resources of information, staff, expertise, infrastructure, and finance. Information networking is a set of two or more computers connected together to share information and resources link printed or hard disk etc. It is set on interrelated information systems associated with communication facilities.

The term "Information Networking" is also necessary which, transmit information or data form, one library, or other information centers to another. Networking has become a very powerful link in the co-ordination & dissemination of resources.

Discussion

Objectives of Resource Sharing and Information Networking:

Following are a few objectives of Resource Sharing and Information Networking;

- The core goal of RS is the maximize the availability of materials and services to minimize expenses.

- **Increased Availability and Accessibility of resources:** Clientele of the participating libraries will have access to resources available in all the libraries. Resources can be moved from one library to another manually or through modern means to easy access and free flow information.

- **To Diminish Cost:** Resource Sharing helps in building the specialized collection and all participating libraries need not duplicate the procurement of similar materials. This facility's availability of larger collection and even the basic materials required by the user can be obtained without causing much delay.

- **Promote Exploitation of Resources:** Resource sharing advocates making reading materials of one library available to the clients of other libraries. Thus, resource sharing exposes the reading materials to a wider group of users. Similarly, the services of a library can be exploited by the users of other libraries.

Assist member libraries in the section of materials. Purchase catalogue and process library materials.

On the basis of experience and involvement in resource sharing activities in the area of management it can be visualized that the management institution can have the following objectives for their resource sharing initiatives;

Conclusion and future work

A computer network, or simply a network, is a collection of computers and other hardware components interconnected by communication channels that allow sharing of resources and information. Today, computer networks are the core of modern communication. All modern aspects of the public Switched telephone network (PSTN) are computer-controlled. Telephony increasingly runs over the Internet Protocol, although not necessarily the public Internet. The scope of communication has increased significantly in the past decade. This boom in communications would not have been possible without the progressively advancing computer network. Computer networks, and the technologies that make communication between networked computers possible, continue to drive computer hardware, software, and

peripherals industries. The expansion of related industries is mirrored by growth in the numbers and types of people using networks, fromthe researcher to the home user.

Reference

[1]. https://en.wikipedia.org/wiki/Shared_resource

[2]. https://www.techopedia.com/definition/24796/shared-resources

[3].

https://www.igi-global.com/dictionary/resource-sharing/25243

[4]. https://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.460.1387&rep=rep1&type=pdf

[5].

https://www.researchgate.net/publication/312496144_Networking_and_Resource_Sharing_among_Libraries

[6]. https://egyankosh.ac.in/bitstream/123456789/33171/1/Unit-12.pdf

[7]. https://www.g2.com/articles/what-is-a-network

[8]. https://www.igi-global.com/dictionary/resource-sharing/25243

[9]. https://www.ibm.com/docs/en/pasc/1.1?topic=resources-resource-sharing

[10]. https://assignment.ignouservice.in/2022/02/what-is-resource-sharing-discuss-its.html

[11]. https://www.lawinsider.com/dictionary/resource-sharing

[12]. https://www.lisedunetwork.com/resource-sharing-modern-library/