**Lab - Researching Peer-to-Peer File Sharing**

# Objectives

**Part 1: Identify P2P Networks, File Sharing Protocols, and Applications**

**Part 2: Research P2P File Sharing Issues**

**Part 3: Research P2P Copyright Litigations**

# Background / Scenario

Peer-to-peer (P2P) computing is a powerful technology that has many uses. P2P networks can be used to share and exchange files, and other electronic materials.

The use of P2P networks to upload, download, or share copyrighted material, such as movies, music, and software, can violate the rights of copyright owners. In the P2P file-sharing context, infringement may occur when one person purchases an authorized copy and then uploads it to a P2P network to share with others. Both the individual who makes the file available and those making copies may be found to have infringed the rights of the copyright owners and may be violating copyright law.

Another problem with P2P file sharing is that very little protection is in place to ensure that the files exchanged in these networks are not malicious. P2P networks are an ideal medium for spreading malware, such as computer viruses, worms, Trojan horses, spyware, adware, and other malicious programs.

In this lab, you will research available P2P file sharing software and identify issues that can arise from the use of this technology.

**Required Resources**



Device with Internet access

# Part 1: Identify P2P Networks, File Sharing Protocols, and Applications

In Part 1, you will research P2P networks and identify popular P2P protocols and applications.

**Step 1: Define P2P networking.**

1. What is a P2P network?

Peer-to-peer (P2P) is a decentralized communications model in which each party has the same capabilities and either party can initiate a communication session. Unlike the client/server model, in which the client makes a service request and the server fulfills the request, the P2P network model allows each node to function as both a client and server.

1. Identify at least two advantages that P2P provides over client-server architecture.

1) It is easy to install and so is the configuration of computers on this network,

2) All the resources and contents are shared by all the peers, unlike server-client architecture where Server shares all the contents and resources.

1. Identify at least two disadvantages of P2P networks.

1) In this network, the whole system is decentralized thus it is difficult to administer. That is one person cannot determine the whole accessibility setting of whole network.

2) Security in this system is very less viruses, spywares,trojans, etc malwares can easily transmitted over this P-2-P architecture.

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**Step 2: Identify P2P file sharing protocols and applications.**

1. Identify at least two P2P file sharing protocols used today.

BitTorrent, Ares

1. Identify at least two popular P2P file sharing applications available today.

BitComet, BitTornado

1. What P2P file sharing protocol is attributed to producing the most P2P traffic on the Internet today?

BitTorrent, LimeWire

# Part 2: Research P2P File Sharing Issues

In Part 2, you will research P2P copyright infringement and identify other issues that can occur with P2P file sharing.

**Step 1: Research P2P copyright infringement.**

1. What does the acronym DMCA stand for and what is it?

The Digital Millennium Copyright ACT, is a United States copyright that implements two 1996 treaties of the WIPO.

1. Name two associations that actively pursue P2P copyright infringement?

The RIAA, the MPAA

1. What are the penalties for copyright infringement?

Criminal and Civil

1. What are the file sharing copyright laws in your area? Are they more strict or less strict than those in other areas of the world? How aggressively do enforcement agencies in your area pursue those who share copyrighted material?

Copyright law in the U.S. is governed by federal statute, namely the Copyright Act of 1976. The Copyright Act prevents the unauthorized copying of a work of authorship.

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**Step 2: Research other P2P issues.**

1. What types of malware can be transported through P2P file sharing?

Trojan horses, and worms

1. What is Torrent poisoning?

The act of intentionally sharing corrupt data with misleading file names using BitTorrent protocol.

1. How could identity theft occur through the use of P2P file sharing?

If the P2P client software is incorrectly configured it may provide access to the personal information and files stored on your computer.

# Part 3: Research P2P Copyright Litigations

In Part 3, you will research and identify historical legal actions that have occurred as a result of P2P copyright infringement.

1. What was the first well-known P2P application that specialized in MP3 file sharing and was closed by court order? Napster

1. What was one of the largest P2P file sharing lawsuits ever?

In 2011 Dunlap launched the largest Bit Torrent lawsuit ever.

## Reflection

How can you be sure that the files you are downloading from P2P networks are not copyrighted and are safe from malware? There is no absolute assurance that P2P files are free of malware and not copyrighted. Use P2P file sharing applications at your own risk.