

# Networking

# Computer Networking Terminology



**WAN (Wide Area Network)** that covers a wide area such as a city.



**LAN (Local Area Network)** that covers a small area such as a small office or home. It physically connects all the computers located in the premises.



**Internet** - It is a computer network system that connects the computers of the world. It is normally connecting through WAN and LAN.



**Intranet** - It is a close room computer network system, as it covers a small area and only authorized people can access it.

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**Extranet** it is also a sort of Internet the access to which is granted only to a few.



**World Wide Web (WWW)** it is the service that is used on Internet to view and search contents (in the form of web-pages).



**Instant messaging (IM)** it is an online facility that facilitates us to chat or talk. Such service is provided by Skype, Google Talk, Windows Live Messenger, Yahoo Messenger, etc.



**Voice over Internet Protocol (VoIP)** it is a Protocol, which is used especially for voice transfer over IP network. Likewise, it facilitates users to make phone-calls by using internet.

# Computer Networking Terminology



**Really Simple Syndication (RSS)** - It is a technique, which is used for the dissemination of information, articles, etc. Users normally subscribe to the RSS channel in order to receive news. After subscription, users do not need to visit the respective website rather they receive emails regarding the same.



**Web log** - It is a sort of online inventory (normally on a specialized topics) that consists of a series of entries. These entries are arranged in opposite chronological order. The person who maintains the weblog regularly update it with a new information.



**Podcast** - It is a digital file that normally contains audio or video record and is available on the Internet as well.



**Social networking websites** - It refers to the websites that facilitate users with a common platform where they can share their message (in text, audio, or even video form), images, videos, etc. For example, Facebook, Google+, Twitter, LinkedIn, MySpace, etc.

# Computer Networking Terminology



**Chat Rooms** - It is a dedicated area on the Internet that facilitates users to communicate.



**Public Switched Telephone Network (PSTN)** it is a technical expression for public telephone system.



**Integrated Services Digital Network (ISDN)** - It is a set of communication standards that transmits voice, video, data, and other network services simultaneously.



**Asymmetric Digital Subscriber Line (ADSL)** - It is a sort of digital subscriber line (DSL) technology that facilitates faster data transmission.

# Computer Networking Terminology



**Download** - It is a process that saves data from Internet onto a personal computer.



**Upload** - It is a process that transfers the saved data from a personal computer to Internet server.



**Dial-up** - It is a technique in which a phone line is used in order to connect to the Internet.



**Broadband** - It is a wide bandwidth data transmission that transports multiple signals and traffic types swiftly.



# Configuring TCP/IP on Windows operating systems

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Configuring Windows clients for TCP/IP involves installing and configuring the TCP/IP network protocol.

- The following instructions are based on the Configuring TCP/IP function of Windows XP.
1. Click **Start > Settings > Control Panel**.
  2. On the control panel, double-click **Network and Dial-Up Connections**.
  3. Right-click **Local Area Connection**.
  4. Click **Properties**. If **Internet Protocol (TCP/IP)** does not appear in the list, do the following:
    1. Click **Install**.
    2. Select **Protocol**, and then click **Add**.
    3. Select **Internet Protocol (TCP/IP)**.
    4. Click **OK**. This returns you to the Local Area Connection Properties window.
  5. Select **Internet Protocol (TCP/IP)**, and then click on **Properties**.



# Configuring TCP/IP on Windows operating systems

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6. Select **Using the Following IP Address**. Check with your network administrator to determine the correct settings for this tab. If your PC does not automatically obtain IP and DNS addresses, do the following:

- a. Enter the IP address of your PC (for example, 199.5.83.205).
- b. Enter the subnet mask (for example, 255.255.255.0).
- c. Enter the default gateway (for example, 199.5.83.1).
- d. Enter the preferred DNS server (for example, 199.5.100.75).
- e. Enter the alternate DNS server (for example, 199.5.100.76).

7. If you are using a Windows Internet Name Server, click the **Advanced** tab, select **WINS Address**, and do the following:

- a. Click **Add**.
- b. Enter the primary WINS server (for example, 199.5.83.205).
- c. Enter the secondary WINS server (for example, 199.5.83.206).
- d. The remaining settings should remain as the defaults.

8. Click **OK** on the **Local Area Connection Properties** window. It is not necessary to restart your PC.



# Accessing Network Resources

- **Connecting to a Network**

You can connect to a network with wired and wireless connections. To view your network connection, check the network icon in the right part of the main panel. If you click the icon, you can see more details in the menu. Click the connection name to see more details and access the settings.

- **Sharing Directories in Mixed Environments**

Using GNOME Files, configure your files and directories to share with other members of your network. Make your data readable or writable for users from any Windows or Linux workstation. Sharing and exchanging documents is a must-have in corporate environments. GNOME Files offers you file sharing, which makes your files and directories available to both Linux and Windows users.

- **Managing Windows File**

SUSE Linux Enterprise Server can be configured to integrate into an existing Windows network. Your Linux machine then behaves like a Windows client. It takes all account information from the Active Directory domain controller, just as the Windows clients do.

- **Configuring and Accessing a Windows Network Printer**

You can configure a Windows network printer through the GNOME control center.

# Managing Windows File

With your SUSE Linux Enterprise Server machine being an Active Directory client, you can browse, view and manipulate data located on Windows servers. The following examples are the most prominent ones:

- **Browsing Windows Files with GNOME Files**

Use GNOME File's networking browsing features to browse your Windows data.

- **Viewing Windows Data with GNOME Files**

Use GNOME Files to display the contents of your Windows user directory as you would for displaying a Linux directory. Create new files and directories on the Windows server.

- **Manipulating Windows Data with GNOME Applications**

Many GNOME applications allow you to open files on the Windows server, manipulate them and save them back to the Windows server.

- **Single Sign-On**

GNOME application, including GNOME Files, support Single Sign-On. This means that you do not need to re-authenticate when you access other Windows resources. These can be Web servers, proxy servers or groupware servers like Microsoft Exchange. Authentication against all these is handled silently in the background using the username and password you provided when you logged in.

# Managing Windows File

To access your Windows data using GNOME Files, proceed as follows:

- Open GNOME Files and click Other Locations in the Places pane.
- Double-click Windows Network.
- Double-click the icon of the workgroup containing the computer you want to access.
- Click the computer's icon (and authenticate if prompted to do so) and navigate to the shared directory on that computer.

## Folder and File Sharing Permissions

Six standard permission types which apply to files and folders in Windows:

- Full Control
- Modify
- Read and Execute
- List Folder Contents
- Read
- Write

# Folder and File Sharing Permissions

- Full Control

Permits the user(s) to:

- view file name and subfolders
- navigate to subfolders
- view data in the folder's files
- add files and subfolders to the folder
- change the folder's files
- delete the folder and its files
- change permissions.

# Folder and File Sharing Permissions

- Modify

Permits the user(s) to:

- view the file names and subfolders
- navigate to subfolders
- view data in the folder's files
- add files and subfolders to the folder
- change the folder's files
- delete the folder and its files
- open and change files

# Folder and File Sharing Permissions

- Read and Execute

Permits the user(s) to:

- view the file names and subfolders
- navigate to subfolders
- view data in the folder's files
- run applications

# Folder and File Sharing Permissions

- List Folder Contents

Permits the user(s) to:

- view the file names and subfolders
- navigate to subfolders
- view folders
- does not permit access to the folder's files



# Folder and File Sharing Permissions

- Read

Permits the user(s) to:

- view the file names and subfolders
- navigate to subfolders
- open files
- copy and view data in the folder's files

# Folder and File Sharing Permissions

- Write

Permits the user(s) to:

- create folders
- add new files
- delete files