

# *IRC: The Internet Relay Chat*

Tehran Linux Users Group



# Overview

- What is IRC?
  - A little bit of “How it all began?”
  - Yet another Client/Server model
  - RFC-1459
  - The culture itself
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# What is IRC?

- Internet Relay Chat (IRC) is a form of real-time Internet chat or synchronous conferencing. It is mainly designed for group (many-to-many) communication in discussion forums called channels, but also allows one-to-one communication and data transfers via private message.
  - IRC was created by Jarkko "WiZ" Oikarinen in late August 1988 to replace a program called MUT (MultiUser talk) on a BBS called OuluBox in Finland. Oikarinen found inspiration in a chat system known as Bitnet Relay, which operated on the BITNET.
  - IRC gained prominence when it was used to report on the Soviet coup attempt of 1991 throughout a media blackout. It was previously used in a similar fashion by Kuwaitis during the Iraqi invasion. Relevant logs are available from [ibiblio archive](#).
  - IRC client software is available for virtually every computer operating system.
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# *A little bit of “How it all began?”*

- While working at Finland's University of Oulu in August 1988, he wrote the first IRC server and client programs, which he produced to replace the MUT (MultiUser Talk) program on the Finnish BBS OuluBox. Using the Bitnet Relay chat system as inspiration, Oikarinen continued to develop IRC over the next four years, receiving assistance from Darren Reed in co-authoring the IRC Protocol. In 1997, his development of IRC earned Oikarinen a Dvorak Award for Personal Achievement—Outstanding Global Interactive Personal Communications System; in 2005, the Millennium Technology Prize Foundation, a Finnish public-private partnership, honored him with one of three Special Recognition Awards.
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# *Early IRC Servers*

The first IRC daemon was written in the summer of 1988 by Jarkko himself. Originally intended as a BBS-style replacement for Talk, IRC quickly spread; first through Scandinavian, and then throughout the rest of the world. Within a year there were over 40 servers linked up.

At this stage there was only one network, and so a name unnecessary - it was simply 'IRC'; but as the size of the network grew, disagreements began to form. IRC was a pretty chaotic medium with netsplits, nick collisions, and channel takeovers all commonplace; and it was inevitable that at some stage users would split off to form their own networks.



# *Lots of netsplits!*

One of the first major splits was in 1992, when Wildthang created the Undernet network. Originally intended as a test network, Undernet quickly grew, gaining a reputation as a friendly network due to its introduction of services to protect users and channels.

Two years later, Undernet itself forked, the new networking becoming DALnet. DALnet's founder, dalvenjah, took Undernet's concept of services to a new level, introducing support for nick registration, G-lines, and a host of other features.

Meanwhile on IRCnet (as the original IRC network was now known), feelings were running high. IRCnet was opposed to the concept of channel/hick 'ownership' which Undernet and DALnet had introduced, but clearly something had to be done about the constant channel takeovers that were occurring. Two alternative ideas were proposed: nick/channel delay, and times tamping (see <http://www.irc-help.org> for information), but there was bitter dispute over which to implement.

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In August 1990 the first major disagreement took place in the IRC world. The "A-net" (Anarchy net) included as server named eris.berkeley.edu. It was all open, required no passwords and had no limit on the number of connects. As Greg "wumpus" Lindahl explains: "it had a wildcard server line, so people were hooking up servers and nick-colliding everyone".

The "Eris Free network", EFnet, made the eris machine the first to be Q-lined (Q for quarantine) from IRC (wumpus' words again: "Eris refused to remove that line, so I formed EFnet. It wasn't much of a fight; I got all the hubs to join, and almost everyone else got carried along."). A-net was formed with the eris servers, EFnet was formed with the non-eris servers. History showed most servers and users went with EFnet. The name EFnet lived only shortly, as soon as ANet had died, the name EFnet became void too. There was one and only IRC left again.

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# Popular Servers

In July of 1996, IRCnet split, with most of the North American servers leaving to form EFnet, leaving IRCnet as a mostly European network.

Since then, hundreds of other smaller networks have formed, most using modified versions of either DALnet, EFnet, IRCnet, or Undernet's ircd.

QuakeNet is the largest IRC network, with peak user counts close to 120,000 every day and over 120,000 channels. At its peak on 8 February 2005, the network recorded 243,389 simultaneous connections.

Founded in 1997 as an IRC network for QuakeWorld players, QuakeNet has seen huge growth over the years as it attracted many other gamers. It became popular initially because of its network stability and service bot 'Q' and later 'L' which perform channel management services.

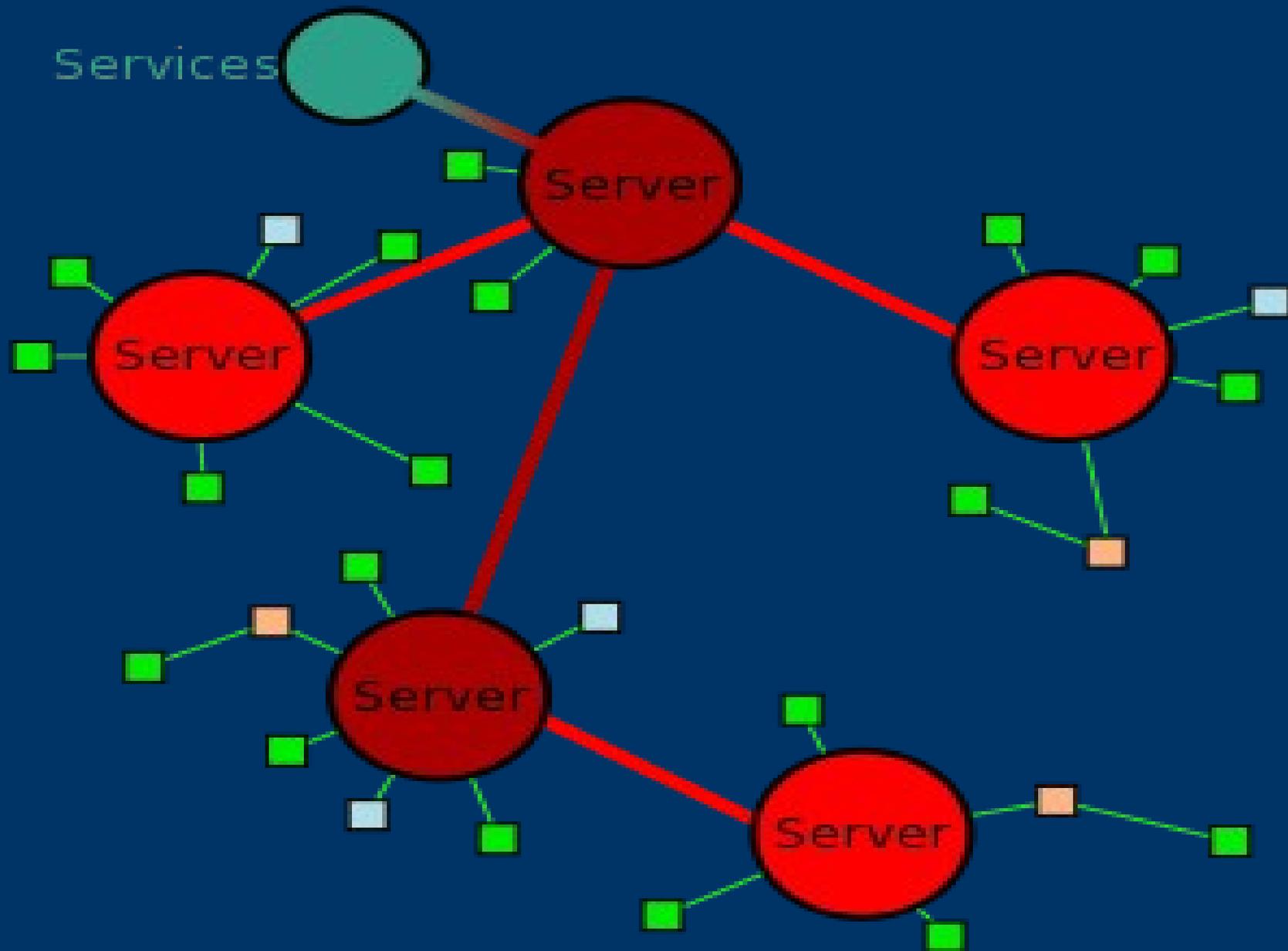
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TubNet was the next network to splinter off. It was created by a crowd of people in #hottub that grew tired of all the netsplits. It got 5 servers and around 100 users. It died again in September the same year.

One often-talked-about event in the history of IRC is the gulf war. In early 1991, live reports were available and more than 300 concurrent users were experienced for the first time.

# Client/Server model



# *Protocol limitations*

This distributed model, which requires each server to have a copy of the global state information, is still the most flagrant problem of the protocol as it is a serious handicap, which limits the maximum size a network can reach. If the existing networks have been able keep growing at an incredible pace, we must thank hardware manufacturers for giving us ever more powerful systems.



# RFC-1459

The IRC protocol was developed over the last 4 years since it was first implemented as a means for users on a BBS to chat amongst themselves. Now it supports a world-wide network of servers and clients, and is stringing to cope with growth. Over the past 2 years, the average number of users connected to the main IRC network has grown by a factor of 10.

The IRC protocol is a text-based protocol, with the simplest client being any socket program capable of connecting to the server.

Excerpt from RFC2810:

The IRC (Internet Relay Chat) protocol is for use with text based conferencing. It has been developed since 1989 when it was originally implemented as a mean for users on a BBS to chat amongst themselves.

First formally documented in May 1993 by RFC 1459 [IRC], the protocol has kept evolving. The IRC Protocol is based on the client-server model, and is well suited to running on many machines in a distributed fashion. A typical setup involves a single process (the server) forming a central point for clients (or other servers) to connect to, performing the required message delivery/multiplexing and other functions.

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## *Other Implementations*

- RFC 2810 Internet Relay Chat: Architecture
  - RFC 2811 Internet Relay Chat: Channel Management
  - RFC 2812 Internet Relay Chat: Client Protocol
  - RFC 2813 Internet Relay Chat: Server Protocol
  - <http://www.irchelp.org/irchelp/rfc/ctcpspec.html>
  - <http://www.irchelp.org/irchelp/rfc/dccspec.html>
  - <http://www.invlogic.com/irc/ctcp.html>
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# Getting connected

## What do I need ?

A computer, a network connection and an IRC client.

## The IRC client

The client is the piece of software you will use to connect to an IRC server over your network connection, much like you use an email client to send and receive Internet mail.

There are quite a few different IRC clients around. If you're unsure of which one to choose, start with mIRC (if you run Windows) or Irclie (if you run Mac OS). If you're on a Unix-type system, you may already have ircII installed (try typing `irc` at the shell prompt). All these clients can be freely downloaded on the net. You're also welcome to use Java IRC.

From a user interface viewpoint, many IRC clients implement a single text area, which is used both for issuing commands (to be executed by the client or server) and for entering actual conversation (to be sent to a user or a channel). In these cases, any input that starts with a special command prefix character (usually `/`), is interpreted as a command. Typing text without that prefix sends the text to the selected channel or user instead.

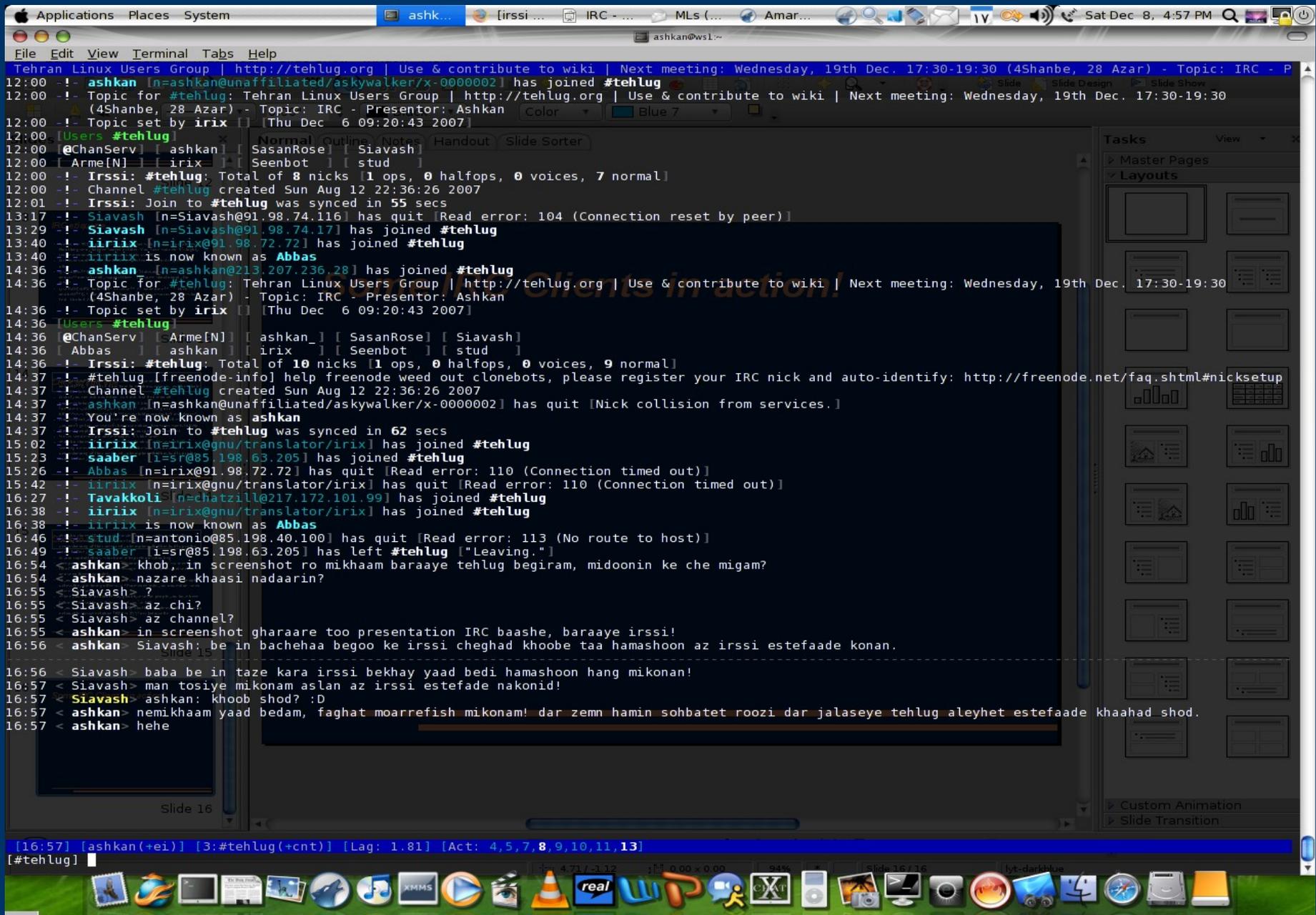
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# *List of some popular Opensource IRC clients*

1. BitchX (BSD)
  2. Chatzilla (MPL/GPL/LGPL)
  3. ii (MIT/X Consortium license)
  4. IrcII (BSD)
  5. Irssi (GPL)
  6. Konversation (GPL)
  7. Kopete (GPL)
  8. KSirc/KVirc (GPL)
  9. Pidgin (GPL)
  10. Xchat (GPL)
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# irssi: The client of the future



# *Where do I connect to?*

In order for you to connect to a specific IRC server, the host you are running the IRC client on (or the firewall or proxy you may be connecting through) must have been granted access to that server. In the case of major IRC networks, such as IRCnet, access should not be a problem since those networks are intended for public use and have servers worldwide. You won't need a password for this kind of public IRC servers.

If your client doesn't come with a list of networks and servers, look here for a list of IRCnet servers.



# *What's the difference between an IRC server and an IRC network?*

The IRC server is the software that runs on a server machine, accepting connections from end users' IRC clients such as yours, and then handles traffic so that the clients can chat together.

An IRC network is formed when two or more servers are connected together. When you chat on a server that is part of an IRC network, you will be able to talk not only to other users on the same server, but also to any user on any other server on the same network. However, users on different networks, e.g. A on IRCnet and B on EFnet, will not be able to chat with each other using normal IRC functionality. (Two servers will not form a network by merely being on the Internet together; they must be explicitly interconnected by their respective operators.)

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Occasionally, on an IRC network, a routing server will reboot, a network connection will fail, or some other problem will sever a connection and cut the network in two. This is known as a netsplit. Until the problem is fixed and the network connected together again, the two "split" network portions will not communicate. All the users on the opposite side of the split will seem to suddenly quit, and their quit comment will show the two servers the split is between, e.g.

```
[04:36] *** psyjaZz has quit IRC (irc.cs.hut.fi *.oamk.fi).
```

If all the users on a given channel are on the same side of the split, the channel will be empty, i.e. cease to exist, on the other side of the split.

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# *Things to note*

## Your IRC nickname

Before logging on, you'll need to decide on a nickname, such as ImANewbie or Chatter69. Your nickname is what other IRC users primarily will know you as; it will show up whenever you join or part a channel, send a private message, and so on. It can be up to a maximum nickname length characters long which is specified by server and given to clients upon connecting.

## Connect!

Unless your real first name is reasonably exotic it will probably already be taken, so try to make up something unique instead. Nicknames on IRC are not owned, but trying to use the same nick as someone else will still cause grief such as server kills and misplaced private messages.

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# Basic IRC usage

## The usermask

In addition to simple nicknames, a more versatile way of referring to user identities on IRC is the usermask, sometimes referred to as user@host or banmask. Usermasks are used e.g. when placing channel bans on the IRC server, and chances are that your IRC client uses them locally as well for specifying who should be ignored, automatically given channel operator status etc.

The mask is constructed as follows:

1. the nickname
2. ! (separator character)
3. the user name
4. @ (separator character)
5. the host name or IP address

Wildcards are allowed, e.g. `*!*@*` would cover anyone on IRC. Some servers also support the special wildcard `#`, which signifies one digit, and CIDR prefixes, such as `*!*@192.168.0.0/23` (instead of `*!*@192.168.0.*` and `*!*@192.168.1.*`).

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# The nickname

Since IRC servers "kill" (i.e. disconnect) duplicate nicknames on sight, the nickname is often enough to specify a user.

Nicknames can, however, be changed at will, so they're not useful for control purposes; if you decide to e.g. have your IRC client ignore someone who's flooding you with unwanted messages, you don't want him to be able to just change his nickname and continue harrassing you.

# The user name

The user name will be either the name your IRC client provides at logon, or the user name part of your Ident server's response. It may be preceded by a special character indicating whether the IRC server received an Ident response from your host (~ indicates missing Ident) and whether your connection is restricted (from using certain commands).

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# The host name or IP address

Your host name will be the DNS (Domain Name System) name for the IP address you're connecting from. If your network's DNS is broken or some other problem prevents the lookup from succeeding, your usermask will contain your IP address instead.

Let's assume my nick is john, my user name is jdoe, and the host I run my IRC client on is ws155.example.com. This can be expressed as john!jdoe@ws155.example.com. If my reverse DNS wouldn't work, the usermask would be something like john!jdoe@10.10.10.10 instead.

## Can I use someone's usermask as his mail address?

Due to the @ character, the user@host part of the usermask looks similar to a mail address, but nevertheless it isn't one. Mail sent to IRC user@host addresses on Unix systems have a certain chance of finding its way to the intended recipient since the user name probably exists and the host machine may happen to run a mail server. For the most part, however, this cannot be counted on.

# *Using IRC channels*

## Using IRC channels

One way of chatting is joining one or more channels. A channel is a group of users chatting (or idling) together. Channels are usually formed by people with something in common - teenagers living in the same city, fans of the same rock group, Linux enthusiasts... Any text you send to a channel will be visible to all the users on that channel (unless they have set their clients to ignore you).

Your IRC client may come with a pre-loaded list of channels, but there's no guarantee that those channels happen to be in use on your particular server or network at any given time. You can have your client download the current list of channels, but if the list is long, the server may disconnect you for flooding the connection. You may want to search on the Web instead.

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The channel listing generated by your IRC server will show the channel name, the topic if one exists, and the number of users currently on that channel. Channels where new users are welcome often have an informative topic line in the language of the channel.

When you have found a suitable channel, use the command JOIN to enter it, e.g. /JOIN #mychannel or /JOIN &another. You're not restricted to sitting on one channel at a time; you may join several if you want to. I usually idle on a few different channels.

## What do the # and & prefixes in channel names mean?

They exist so that channel names will be distinguished from user nicknames. If the server isn't connected to an IRC network, it doesn't matter which prefix - # or & - it has been created with. However, if the server is connected to another server (i.e. an IRC network), only # channels will work globally, across the network; & channels will be local and work only on the local server.

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# Who are these people with nicknames that start with a @ sign?

The channel operators (chops or chanops) are the hosts and rulers of their channel. You can recognize them by the @ prefix added to their nickname whenever it's listed in the context of that channel.

Chanops can set modes and kick and ban users as they please. There is basically no one you can complain to about having been treated unfairly by a channel operator, e.g. kickbanned for no good reason; instead, you can create a channel of your own and run that channel as you see fit.

# How can I persuade the channel operators of an existing channel to op me?

Hang out on the channel frequently, acting according to the norms for that channel. Asking for ops is one of the most counter-productive things you can do; you will look like a clueless newbie who's interested only in gaining channel operator status.

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# Why can't I join the channel of my choice?

If you're prevented from joining the channel of your choice, chances are that one or more of the following circumstances exist:

- \* you're banned from the channel (channel mode +b) - this doesn't necessarily mean that you personally are unwelcome; bans are often set to exclude anyone from a certain domain or network
- \* the channel is invite-only (channel mode +i) and you haven't been invited
- \* the channel is keyed (channel mode +k) and you haven't provided the password
- \* the channel has a user limit (channel mode +l) and is full

# Why can't I talk to the channel?

If the channel is moderated (channel mode +m), you will not be able to send text to the channel unless you have been "voiced" (mode +v).

Also, if you are banned from a channel while on that channel, you won't be able to talk on that channel any more. Note that merely setting a ban doesn't remove anyone from the channel; that's what the KICK command is for.

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## Can I change the topic line of the channel?

The TOPIC command may be used to associate a channel with a topic (typically displayed in conjunction with the channel), e.g. `/TOPIC #mychannel This channel is all about me`. If the channel mode `+t` is on, only channel operators may set the topic.

## How do I leave a channel?

When you want to leave the channel, issue the PART command, as in `/PART #mychannel`.

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# IRC etiquette

- Never use IRC logged as root or any user with excessive privileges. Bad things may happen sooner or later. You were warned. It's highly recommended you create a user only to use IRC.
  - Act as an idiot. If you want to be respected, then first respect each other.
  - Use colors (^C). Most Linux users don't tolerate such mIRC crazes, and ircII doesn't really support them. The same should apply for ANSI.
  - Use full CAPS, bold (^B), reverse (^V), underline (^\_), blink (^F), and bell (^G). The first 4 are here to emphasize words, not the whole text. The last 2 are just very annoying.
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- Use full CAPS, bold (^B), reverse (^V), underline (^\_), blink (^F), and bell (^G). The first 4 are here to emphasize words, not the whole text. The last 2 are just very annoying.
  - Ask if you can ask a question. Just ask, but first read all documentation available on the subject. Start looking at /usr/doc/ (on some systems it may be /usr/doc/, otherwise go to <http://www.tldp.org/> or <http://www.ibiblio.org/pub/Linux/docs/> .
  - Don't repeat your question immediately. Wait at least 10 minutes. If you don't get any answer it's because nobody knows or wants to help.
  - Respect people's choice, they're not your personal assistant.
  - Never send mass private messages. It's like spam.
  - Watch a channel for several minutes to observe the mood before sending a message after you join to make sure you have some understanding of the community atmosphere that has built up in the room before you arrived.
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- Watch a channel for several minutes to observe the mood before sending a message after you join to make sure you have some understanding of the community atmosphere that has built up in the room before you arrived.
  - Avoid capital letters, which are interpreted as shouting.
  - Keep messages short to avoid "flooding" other people's screens with a lot of text. If you have a long message, break it into several sentences and send them separately.
  - If you are going to participate in a channel, then don't ignore people unless they are being offensive. If someone asks you a question, send some sort of reply.
  - When you leave a channel, say goodbye so the people you have been talking with so they will know that you've left.
  - If you want to know more about IRC chat habits, please either refer to netiquette (RFC-1855) or chatiquette.
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Mass-inviting strangers to your channel is considered annoying; you will be ignored, kicked, banned, killed and/or K-lined.

Never output junk such as the Microsoft Chat Appears as lines, the lame Showdown advertisements or the large trout in mlRC. nobody likes it; you may be kicked and/or banned

Never pester other users for personal information such as age, sex or location it's an invasion of privacy; use the WHOIS command instead. Of course, you may introduce yourself if you want to, and the other person will do the same if he wants to.

Never sending or accept unsolicited files. Trojan may do nasty things to your computer.

Never send the same line of text several times, or hit Enter after every few words the conversation will scroll off the screen prematurely.

Never type in ALL CAPS. it's considered shouting.

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# Quitting IRC

## How do I log off IRC?

Why would you want to do a stupid thing like that? - Just kidding...

Use the command QUIT, followed by an optional goodbye message, e.g. /QUIT See you all tomorrow

## Is someone really trying to kill me?

Sometimes a server may forcibly disconnect you from IRC, i.e. "kill" your connection. IRC operators and server administrators can issue kill messages to get rid of abusive users. Most kills, however, are automatically generated server kills, due to nickname collisions or similar network problems.

The kill notice should explain the reason for the kill. If the kill is generated by a human, the reason is usually spelled out quite clearly. Server kills tend to be more cryptic, but are explained here.

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Not nearly all involuntary disconnections are due to kills. Unless your client shows you a kill message, the disconnection was probably due to some other reason, such as flooding, not responding to a PING, or a network problem.

## What do PING? and PONG! mean?

PING is the IRC server making sure that your client is still there. When a PING message is received, the client needs to reply with a PONG message, otherwise the server will end the connection.

A PING may occur immediately when you connect to IRC; the idea behind this is checking that you're not forging ("spoofing") your IP address; the PING message is sent to the address that you claim to connect from, and it includes a random string that must be sent back together with the PONG reply.

During the connection, the server sends PING messages at constant intervals, e.g. every 180 seconds.

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# *What does DCC/CTCP mean?*

The DCC protocol allows two IRC clients to connect with each other directly (as explained earlier, normal IRC chat takes place through one or more IRC servers instead). DCC can be used for private chatting (DCC CHAT) and also for sending and receiving files (the sender uses DCC SEND, after which the recipient accepts the file using DCC GET).

Client-To-Client Protocol (CTCP) is a special type of communication between Internet Relay Chat (IRC) clients.

CTCP is a common protocol implemented by every major IRC client in use today. CTCP extends the original IRC protocol by allowing users to send private messages and to query other clients for specific information. Additionally, CTCP can be used to encode messages that the raw IRC protocol would not allow to be sent over the link, such as messages containing newlines or the byte value 0.

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CTCP allows users to query a remote client from the version of the client they are using (via CTCP VERSION), the time (via CTCP TIME), or get remote user info (via CTCP USERINFO), among other things. It is used to implement the /me command. CTCP is also used to negotiate DCC connections.

A CTCP message is implemented as a PRIVMSG where the first and last characters of the message are ASCII value 0x01. Additionally, characters which would not be allowed in the IRC protocol are escaped. Since a PRIVMSG as a rule should not generate another PRIVMSG as a reply, a CTCP reply is implemented with a NOTICE instead of a PRIVMSG, but is otherwise identical.

# *How can I get information on other people?*

ISON will simply tell you whether certain nicknames are online or not: /ISON Per Marie Elvis.

NAMES will list nicknames and channels, or nicknames on one or more specified channels.

The WHO command was designed to list users, but nowadays it has very limited use since most users (explicitly or automatically) set user mode +i, making them "invisible" to the WHO command.

WHOIS will return information about a particular user, e.g. /WHOIS MyFriend. On an IRC network, the best source of information will often be the server that user is connected to. A convenient shortcut to specifying that server is using the nickname for this as well, as in /WHOIS MyFriend MyFriend.

WHOWAS may find similar information about a user who already has signed off IRC or changed his nickname.

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# How do I get rid of someone who annoys me?

If you become the target of abusive behavior such as flooding, don't waste time looking for someone to ask for help. Instead, protect yourself. You can block private messages, CTCP messages and DCC requests using the ignore functionality of your client software. If the abuser disrupts a channel you're on, notify one of the channel operators (or kick/ban the user yourself if you're a chanop).

# How can I find out stuff about the servers?

The STATS command is used to read configuration information and statistics from a certain server (from the server you are connected to, if none is specified). For example, /STATS i would return the I and i lines (a list of users and hosts that will be allowed to connect) from your current server's configuration file, and /STATS k irc.funet.fi would list the K lines (a list of users and hosts that are banned even though they may have an I or i line) in force on that server. There are other options as well, not all of which simply retrieve static information; try c, h, l, m, o (for O lines, or operator host masks), u and y!

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Other commands that will provide you with server-related information include ADMIN, INFO, LINKS, TIME, TRACE and VERSION. All of these will accept a server name for a parameter, e.g. /ADMIN irc.funet.fi.

## Who runs IRC?

An "IRC admin", a server administrator, is a person who is in charge of running an IRC server. He has access to the server configuration files and therefore complete control over how the server runs; who is allowed to connect, etc.

IRCCops (IRC operators, not "IRC Cops"!) help admins run the IRC service and are also expected to assist users. Ops are able to connect and disconnect servers, and disconnect ("kill") and ban ("K-line") users from the server.

IRC operators should not be confused with channel operators. Although RFC 1459 states otherwise, IRCCops nowadays typically take no part in channel conflicts, so you should not ask one to kill off a bad person so you can get "your" channel back.

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For probably most organizations running IRC servers, IRC is not a lucrative business; you can't sell stuff on IRC or place advertisements there as you can on the Web. Therefore ISP executives often couldn't care less about whether IRC stays or goes. Instead, IRC servers - no matter what the organization - are run largely on a volunteer basis, and it's often reasonably easy to annoy those overworked volunteer IRC admins and ops enough to convince them that your network or domain - or even your top level domain, such as everyone in your country - doesn't deserve access any more.

Remember, access to IRC is a privilege, not a right.

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# User Modes

- o - Global Server Operator
  - O - Local Server Operator
  - i - Invisible
  - w - Receive WallOps
  - s - Receive Server Notices
  - c - Receive Client Connection/Exit Notices
  - r - Registered nick
  - k - Receive Server Kill Notices
  - f - Receive Server Flood Notice
  - y - Receive Stats/Links Request Notices
  - d - Receive Debug Information Notices
  - a - Services Administrator
  - A - Server Administrator
  - b - Receive ChatOps
  - g - Receive GlobOps
  - n - Receive Routing Notices
  - h - Helper
  - R - Routing Team member
  - e - Receive Virus File Send Notices
  - m - Receive SpamBot Notices
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# Channel Modes

- n - No external channel messages
  - o - Channel Operator
  - O - IRC Operators only
  - p - Private
  - r - Registered channel with ChanServ
  - R - Only Registered nicks can join
  - s - Secret
  - t - Only ops change the Topic
  - v - Voice in the channel
  - b - Ban
  - c - No colours allowed
  - h - Channel Helper (HalfOp)
  - i - Invite only
  - k - Key
  - l - Limit
  - m - Moderated
  - M - Only Registered nicks can speak
- 
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# Server Modes

- C - Command Line Configuration
  - d - Do ID
  - D - Debug Mode
  - H - Hub
  - i - Show Invisible Users
  - I - No Default Invisible
  - p - Crypt Oper Password
  - u - ircII Kludge
  - Y - Use Syslog
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# IRC Basic Commands

## nick

Sets your nick. Syntax: /nick yournewnick The maximum nicklength on Undernet is 9 characters. See NICKLEN in chapter 7 for the length at your net and 6.9 for legal characters in a nick.

There's a "nickchange too fast" floodstopper in ircu. A person could flood a channel with his nickchanges while for the same reason being hard to kick. You can not change your nick more than once in 30 secs, or twice if it's been unchanged for 60 secs already. You can't change your nick if you'r in a channel where you'r banned.

## privmsg

Syntax: /privmsg receiver text

If the receiver is a nick, this equals talking to someone in a private window.

If the receiver is a channel and you'r in it, it equals typing something in the channel. also see the sister-command /notice

/msg as it is called in mIRC, could also be used for external messages. When you send a message to a channel from outside with /notice, mIRC and other clients will treat it correctly, while an external /privmsg will appear as if an invisible nick suddenly raised its voice. According to some this is still the correct way, according to others it violates the graphical user interface. Might make for a nice trick anyway..

If we take advantage of the underlying machinery, we can send one message to several destinations.

Here's an example:

```
"/raw PRIVMSG Sabeltann,Timo,#ruminants :The grass is greener on the other side, lets move!"
```

Or just: `"/privmsg nickorchan,nickorchan text"`. (Works in mIRC) Note that since we're overriding mIRC, the text you send isn't displayed in the channelwindow. You will have to `/echo` that in yourself with your script.

(Maybe an idea for suppressing display of text your script send to a channel. Didn't some IRC-virus implement that already?)

PRIVMSG is also taking care of the `/me` statements.

The `/raw` (or `/quote`) command is how you bypass aliases and your clients interpretation of commands. Sometimes, you pass the command directly, like in `/map`, a command mIRC has no "idea" about what means, while in multiple sending above, we used `/PRIVMSG`, as `/msg` is a command in mIRC that it translates according to its own rules, before passing it on as `PRIVMSG` to the server.

Up to ircu2.10.10, there were an extra secure syntax on the form:

```
/msg nick[%host]@server
```

where `host` is the optional address of the nick and `server` the irc-server it resides on. This syntax were intended for sending your password to the channelservice bots, so that you wouldn't mistakeingly send it to someone else posing as them on another network. On Undernet, you could never change your nick into typical service-nicks anyway.

Example:

```
/msg Timo%*.surfers.org@Oslo-R.NO.EU.Undernet.org Hi there! You won't see this if you don't match my criteria
```

This feature isn't of much use as authentication of normal users, for that refer to authentication via the channelservice bots. As of 2.10.11, it does not longer send the message, but curiously enough, will give a "no such nick" if you get the host or server wrong.

Together with the list of servers available from [www.undernet.org](http://www.undernet.org), this supply us with a brute-force way to find a persons' irc-server.

# Notice

Syntax: /notice receiver text where receiver is nick or channel.

The reason for NOTICE according to RCF1459, is to define a way to send messages that should never generate an automatic reply. The object is to avoid loops of responses between scripts/bots, for example this quite repeating conversation:

Bot1: Please send afile.txt

Bot2: Sorry, I'm turned off.

Bot1: I don't understand the command "Sorry, I'm turned off".

Bot2: Sorry I'm turned off.

A ping Query/Reply between users (6.3) is a good example of an automated PRIVMSG/NOTICE pair.

NOTICE-messages may be treated slightly different than PRIVMSG when displayed in mIRC, both in color and which window they'r displayed in. Just as PRIVMSG, you may msg both channels and person. You may send a notice to the channelops alone with: /notice @#channel text

# Whois

Syntax: /whois nick1,nick2, ...

Basic information about a nick. A central command in IRC and it pops up all through this guide.

Usermodes (2.5), getting seconds idle (2.6) e.t.c Notice that the channels in the whois reply are sorted with the channel the nick joined first as the rightmost.

The full internet-address for the user is shown in the whois, also see 2.9. Some nets hide the first part of the address, as an attempt to combat attacks which involve the users' address, e.g portscanning and pinging. Then only IRC-operators may see the full address. (something like this is in the making on Undernet, see 2.5.1) Others will send an IDENTD request to verify the username. mIRC usually handles that. For more information about identd, see the IDENTD RFC. (RFC1413) or check the undernet homepage.

Example:

Debet is ~ted@modem68.johnsonconsulting.com \* Accountancy RULEZ

Debet on @#spreadsheet-newbies

Debet using \*.undernet.org The Undernet Underworld

Debet End of /WHOIS list.

The ~ means that no IDENT has verified the username ted and Debet is an op on #spreadsheet-newbies.

The network does not hide his internet-address modem68.johnsonconsulting.com but it hides what IRC-server he is using, an ircu2.10.10-something feature.

# *A little bit about “l33t” culture*

Leet (written as 31337, 1337, and l33t), or Leetspeak, is a written argot used primarily on the Internet, which uses various combinations of alphanumeric characters to replace Latin letters. The term is derived from the word "elite", and the usage it describes is a specialized form of shorthand.

Initially, the word leet was used as an adjective, to primarily describe the behavior or accomplishments of others in the community. In that usage, Leet generally carries the same meaning when referring to either the game prowess or, in original usage, hacking expertise of another person. From adjective form its use then expanded to include use as an expletive in reaction to a demonstration of the former qualities. With the mass proliferation of Internet use in the 1990s into the 21st century, Leet has since become a part of Internet culture and slang. Leet may also be considered a substitution cipher, albeit with much variation from user to user.

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# *Freenode*

Freenode is a service of Peer-Directed Projects Center (PDPC).

Freenode provides discussion facilities for the Free and Open Source Software communities, for not-for-profit organizations and for related communities and organizations. In 1998, the network had about 200 users and less than 20 channels. The network currently has nearly 40,000 users, freenode provides facilities to a variety of groups and organizations.

It is a popular IRC network. Their servers are all accessible from the DNS name `chat.freenode.net`, which sends the users to the server in rotation that is best able to accept new connections.

## History

freenode began as a 4-person GNU/Linux support channel called `#LinPeople` on EFnet, another IRC network. By 1995 it moved from being just a channel to its own network, `irc.linpeople.org`.

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In early 1998 it changed to Open Projects Net (OPN) with about 200 users and under 20 channels. The OPN soon grew to become the largest network for the free software community, and 20th largest in the world.

In 2002 the name changed to freenode. The Peer-Directed Projects Center was founded as the legal umbrella organization. The OpenProjects.net domain was later put up for sale on eBay , but did not sell.

## Today

freenode is the largest FOSS IRC network in existence, encompassing more than 70,000 users and 10,000 channels.

The top 5 channels (in number of users) are (as of October 15, 2007):

1. #ubuntu at 1133
  2. #gentoo at 905
  3. #debian at 751
  4. ##linux at 616
  5. ##php at 553
- 
-

# *Major events on Freenode*

- On June 24, 2006, a user with the nickname "ratbert" (actually one of lilo's services-linked nicknames) gained the network privileges of Rob Levin (lilo) and took control of the network. It is likely that approximately 25 user passwords were stolen as a result. This user proceeded to k-line many freenode staff members, and most freenode servers subsequently went down for several hours.
  - Freenode administrator Robert Levin, who used the IRC nick lilo, died on Saturday, September 16, 2006. His death was caused by head injuries sustained in a hit and run collision while riding his bicycle on September 12. He fell into a coma at the scene and did not regain consciousness.
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# *#technotux*

#technotux is the primary FLOSS related channel of Iranian GNU operating system users available on Freenode (and probably all around the net)

Running at average users rate of 24, some few weeks ago it reached it's peak during the night, rated at 39 users simultaneously.

It's privacy and policy is declared by it's staff and is available publicly via TehLUG's website.

<http://www.tehlug.org/files/technotux-rules.asc>

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# Resources

## Wikipedia

<http://www.alien.net.au/irc/>

<http://www.mishscript.de/ircguide/>

<http://www.irchelp.org/irchelp>

<http://www.anta.net/irc/survival.shtml>

<http://tldp.org/HOWTO/IRC/>

<http://freenode.net>



***Any questions or comments? Time to ask.***

