Linux IRC mini–HOWTO

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Revision History

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This document aims to describe the basics of IRC and respective applications for Linux.

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1. Introduction

This document is still WIP, and should be treated as such. I'll do my best to keep it updated and accurate.

The following bibles shouldn't be ignored:

- RFC 1459 by Jarkko Oikarinen and Darren Reed was the first about the Internet Relay Chat Protocol – `http://ftp.isi.edu/in-notes/rfc1459.txt`
- RFC 2810 by Christophe Kalt updates RFC 1459 and describes the Architecture of the Internet Relay Chat – `http://ftp.isi.edu/in-notes/rfc2810.txt`
- RFC 2811 by Christophe Kalt updates RFC 1459 and describes the Channel Management of the Internet Relay Chat – `http://ftp.isi.edu/in-notes/rfc2811.txt`
- RFC 2812 by Christophe Kalt updates RFC 1459 and describes the Client Protocol of the Internet Relay Chat – `http://ftp.isi.edu/in-notes/rfc2812.txt`
- RFC 2813 by Christophe Kalt updates RFC 1459 and describes the Server Protocol of the Internet Relay Chat – `http://ftp.isi.edu/in-notes/rfc2813.txt`

Also be sure to check the following links:

`http://www.irchelp.org/`

1.1. Objectives

Among others, the objectives of this mini–HOWTO are:

- Link important resources about IRC;
- Avoid common misuses of IRC by writing an IRC Etiquette;
- List popular clients, servers, bots, and bouncers, along with their maintainers, #channel, small description, download location, home page, and hints;
- List IRC tools available in the latest release of all major distributions.

1.2. Miscellaneous

The latest version of this document is available at
`http://www.pervalidus.net/documentation/IRC-mini-HOWTO/`

A WIP of the next draft may be available at
`http://www.pervalidus.net/documentation/IRC-mini-HOWTO/WIP/`

All drafts are archived at
`http://www.pervalidus.net/documentation/IRC-mini-HOWTO/old/`

Everything *may* be mirrored at
`http://www2.pervalidus.net/documentation/IRC-mini-HOWTO/`

You can e–mail me (in English, French, or Portuguese) with suggestions about the mini–HOWTO. I know this is far from finished, but hope you find it useful. Just try to avoid asking me to add your application, distribution, or site. Most likely I won't, but you can try to persuade me. Also don't ask for technical support. I

have no time to help everyone.

BTW, someone to work on the protocol and server sides would be very welcome.

Frédéric L. W. Meunier – `http://www.pervalidus.net/contact.html`

1.3. Translations

Proposed translations will be linked here. Although I can write in Brazilian Portuguese and French, I'm not going to translate this document in the near future, so feel free to make them.

2. About IRC

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.

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.

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3. Brief History of IRC

The first IRC daemon was written in the summer of 1998 by Jarkko "WiZ" Oikarinen of the University of Oulu, Finland. 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.

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 it's 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 where running high. IRCnet was opposed to the concept of channel/nick 'ownership' which Undernet and DALnet had introduced, but clearly something had to be done about the constant channel takeovers that were occuring. Two alternative ideas were proposed: nick/channel delay, and timestamping (see http://www.irc−help.org for information), but there was bitter dispute over which to implement.

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.

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4. Beginner's guide on using IRC

The standard IRC client is the original ircII. It's part of most Linux distributions, and most other text−based IRC clients (notably BitchX and EPIC) are derived from it.

4.1. Running the ircII program

It's easy to use ircII. Let's say you want to connect to irc.freenode.net as mini−HOWTO.

At the command line, type:

$ irc mini−HOWTO irc.freenode.net

You can also export variables, so you won't need to use them at the command line. For bash and zsh users:

$ export IRCNICK=mini−HOWTO IRCSERVER=irc.freenode.net

For csh and tcsh users, replace *export* with *setenv*.

Add them to your shell profile (e.g. ~/.bash_profile or ~/.zprofile) when you're done.

Other common variables are IRCNAME and IRCUSER, to respectively set the ircname part of a /whois and username as seen at the first line 'mini−HOWTO is ~username@hostname (ircname)'. Keep in mind that IRCUSER won't work if you run an ident daemon (default on most distributions). If you still need to change your username (not recommended, and I hope you're not using IRC logged as root !), install oidentd from `http://ojnk.sourceforge.net/` . To configure, read the oidentd.conf man page. Finally run '/usr/local/sbin/oidentd −g nobody −u nobody'. Add this to your startup scripts (e.g. /etc/rc.d/rc.local) when you're done.

If not set, IRCNICK, IRCUSER, and IRCNAME will be retrieved from /etc/passwd .

4.2. Commands

Use /help to get a list on all available commands (/help help is a good start). Replace *nick* by any IRCNICK.

- First, /set NOVICE off
- /nick IRC−mini−HOWTO changes your IRCNICK to *IRC−mini−HOWTO*
- /set realname The Linux IRC mini−HOWTO changes your IRCNAME to *The Linux IRC mini−HOWTO* (doesn't change on the same connection)
- /j #mini−HOWTO joins channel *#mini−HOWTO*
- /j #unmaintained−HOWTO joins channel*#unmaintained−HOWTO*
- /j #mini−HOWTO changes the active current channel to *#mini−HOWTO*
- /msg *nick* Hi. sends a private message to *nick* containing *Hi.*
- /notice *nick* (or #mini−HOWTO) Hi. sends a notice to *nick* (or #mini−HOWTO) containing *Hi.*
- /query *nick* starts a private conversation with *nick*. /query ends the private conversation
- /me uses *Linux.* sends an action to the current channel or query containing *IRC−mini−HOWTO loves Linux.*
- /dcc chat *nick* starts a chat with *nick*. Use /msg =*nick* (notice the =) to send messages over the chat

- /dcc send *nick* /etc/HOSTNAME sends the given file to *nick*
- /dcc get *nick* receives the file offered by *nick*
- /part leaves the active current channel
- /part #unmaintained−HOWTO leaves channel *#unmaintained−HOWTO*
- /discon disconnects from current IRCSERVER
- /server irc.oftc.net connects to IRCSERVER *irc.oftc.net*
- /quit Bye. quits your IRC session with a reason *Bye.*

Most of the above commands (including the use of environmental variables) will also work in other console−based clients.

4.3. IRC Etiquette

WARNING WARNING WARNING WARNING WARNING

- 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 an user only to use IRC.

$ man adduser

On Linux channels you shouldn't:

- 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.
- 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/` . And 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 their choice, they're not your personal assistant. Also never send mass private messages. It's like spam.

5. Console IRC Clients

5.1. ircII

Maintainer: ircII project

IRC Channel: #ircII (official channel ?) on EFNet `http://www.efnet.org/?module=servers`

Originally written by Michael Sandrof, ircII comes with most Linux distributions. It uses termcap and shouldn't be a choice for most users, but is a standard. Mathusalem and other gurus will use it. Less ventured will regret to have it installed.

You can get the latest version of ircII from `ftp://ircii.warped.com/pub/ircII/` . Homepage at `http://www.eterna.com.au/ircii/`

5.2. EPIC

Maintainer: EPIC Software Labs

IRC Channel: #EPIC on EFNet

Based on ircII, EPIC (Enhanced Programmable ircII Client) is meant for real scripters and users searching freedom. When you start it for the first time you'll notice that you should really learn the basics of scripting.

You can get the latest version of EPIC from `http://prbh.org/?page=ftp` . Homepage at `http://www.epicsol.org/`

5.3. BitchX

Maintainer: Colten Edwards

IRC Channel: #BitchX on EFNet

Originally a script for ircII, BitchX is a popular client intended to reduce the need for scripting by including a huge array of features in the client itself (too many features for even experienced users to remember). Many consider BitchX bloatware (not necessarily a bad thing), but it is very popular amongst users and opers alike.

You can get the latest version of BitchX from `http://www.bitchx.org/download.php` . Homepage at `http://www.bitchx.org/`

5.4. irssi

Maintainer: Timo Sirainen

IRC Channel: #irssi on freenode – `http://freenode.net/irc_servers.shtml` and IRCnet – `http://www.ircnet.org/`

Timo released yagIRC in 1997. It was a GUI client using the GTK+ toolkit. The army called on him a year later, and the new maintainers wouldn't do the job. yagIRC passed away and he started irssi as a replacement. It used GTK+. GNOME and curses versions would appear later. As of 0.7.90 it's only a modular text mode client. Supports Perl scripting.

You can get the latest version of irssi from `http://irssi.org/?page=download` . Homepage at `http://irssi.org/`

5.5. Other Console IRC Clients

There are a few others ircII based clients.

Blackened – `ftp://ftp.blackened.com/pub/irc/blackened/`

Ninja – `ftp://qoop.org/ninja/`

ScrollZ – `http://www.scrollz.com/`

6. X Window IRC Clients

6.1. Zircon

Maintainer: Lindsay F. Marshall

IRC Channel: None ?

Written in Tcl/Tk, uses the native network communications of Tcl.

You can get the latest version of Zircon from `ftp://catless.ncl.ac.uk/pub/` . Homepage at `http://catless.ncl.ac.uk/Programs/Zircon/`

6.2. KVIrc

Maintainer: Szymon Stefanek

IRC Channel: #KVIrc on freenode

Also written with the Qt toolkit, KVIrc is a beast. Supports DCC Voice, built−in scripting language, and plugins.

You can get the latest version of KVIrc from `http://www.kvirc.net/?id=download` . Homepage at `http://www.kvirc.net/`

6.3. X−Chat

Maintainer: Peter Zelezny

IRC Channel: #Linux on ChatJunkies – `http://www.chatjunkies.org/servers.php`

Using GTK+ and optionally GNOME, supports Perl and Python scripting.

You can get the latest version of X−Chat from `http://xchat.org/download/` . Homepage at `http://xchat.org/`

6.4. QuIRC

Maintainer: Patrick Earl

IRC Channel: #QuIRC on DALnet – `http://www.dal.net/servers/index.php3`

Using Tk, supports Tcl for scripting.

You can get the latest version of QuIRC from his Homepage at `http://quirc.org/`

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7. IRC Servers

7.1. IRCD

Maintainer: ircd developers

IRC Channel: #ircd on IRCnet

The original IRC daemon, mainly used by IRCnet. Recent versions have attempted to improve on channel security through the introduction of additional channel types (eg !linux), and channel modes.

You can get the latest version of IRCD from `ftp://ftp.irc.org/irc/server/`. Homepage at `http://www.irc.org/`

7.2. IRCD–Hybrid

Maintainer:

IRC Channel: None ?

Mainly used by EFNet. Hybrid's focus is on speed and efficiency, since it lacks many of the services offered by other networks. In keeping with EFnet's ethos that opers should not be concerned with channel matters, Hybrid doesn't allow opers to set modes on channels, or join channels from which they are banned. It is only relatively recently that Hybrid offered the ability for a service bot to reop an opless channel.

You can get the latest version of IRCD–Hybrid from `http://ftp1.sourceforge.net/ircd-hybrid/` . Homepage at `http://www.ircd-hybrid.org/`

7.3. ircu

Maintainer: Undernet Coder Committee

IRC Channel: #ircu on Undernet – `http://www.undernet.org/servers.php`

Mainly used by Undernet. Following a series of DDoS attacks in 2001/2002, ircu has offered the ability for users and servers to hide their addresses. Many of the /stats commands have also (sadly) been removed from Undernet.

You can get the latest version of ircu from `http://ftp1.sourceforge.net/undernet-ircu/` . Homepage at `http://coder-com.undernet.org/`

7.4. Bahamut

Maintainer: DALnet Coding Team

IRC Channel: #Bahamut on DALnet

Based on DreamForge and Hybrid, Bahamut is the DALnet server. Features include channel and nick registration, support for nicknames up to 15(?) characters, and a memo service.

You can get the latest version of Bahamut from `http://bahamut.dal.net/download.php` . Homepage at `http://bahamut.dal.net/`

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8. IRC Bots

8.1. Eggdrop

Maintainer:

IRC Channel: #eggdrop on Undernet

Generally considered to be *the* IRC bot, Eggdrop offers robust channel protection, and is highly customisable through the use of Tcl scripting.

Multiple eggdrops can be linked together forming a botnet which can span multiple channels, or even networks. On networks without channel registration services, eggdrops are common feature in almost all large channels.

You can get the latest version of eggdrop from `http://www.eggheads.org/downloads/`. Homepage at `http://www.eggheads.org/`

8.2. EnergyMech

Maintainer: Proton

IRC Channel: None

Early versions of EnergyMech (or emech as it is frequently called), earned a reputation as something of a script kiddie's bot, through it's ability to run multiple bots from a single process (thus allowing less desirable users to load up hundreds of vhosted clones from a shell account). This is a reputation emech does not deserve, since it is really a rather good channel protection bot, and recent versions of emech have restricted this capacity (to max 4 bots). A popular alternative to Eggdrop.

You can get the latest version of EnergyMech from `http://www.energymech.net/download.html`. Homepage at `http://www.energymech.net/`

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9. IRC Bouncers (IRC Proxy)

9.1. bnc

Maintainer: James Seter

IRC Channel: None ?

bnc is the original bouncer.

You can get the latest version of bnc from `http://gotbnc.com/download.html` . Homepage at `http://gotbnc.com/`

9.2. muh

Maintainer: Sebastian Kienzl

IRC Channel: None ?

muh is a smart and versatile irc−bouncing tool that will also go on IRC as soon as it's launched, guarding or attempting to get your nick.

You can get the latest version of muh from `http://ftp1.sourceforge.net/muh/` . Homepage at `http://seb.riot.org/muh/`

9.3. ezbounce

Maintainer: Murat Deligönül

IRC Channel: None ?

ezbounce's basic features include password protection, remote administration, logging and listening on multiple ports.

You can get the latest version of ezbounce from his Homepage at `http://druglord.freelsd.org/ezbounce/`

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10. Installation

10.1. Clients

All popular clients use *GNU* Autoconf and *GNU* Automake, thus come with a configure script. Read the installation instructions after you unpack the sources. Be sure you have the required libraries in order to compile. Doing cd *name_of_the_created_directory*; ./configure −−help; ./configure *your_options_here*; make; make install > ~/sources_install.log is the right procedure. Also note that for ircII, EPIC, and BitchX you should really edit include/config.h to suit your needs.

10.2. Servers

Do you really need help to set up a server ?

~$ touch ircd.conf

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11. But what's already included in my distribution ? (Linux on x86)

11.1. Debian

IRC Channel: #Debian on freenode (irc.debian.org –> irc.freenode.net)

Debian – `http://www.debian.org/` includes too many IRC tools to list. You can find them at the following places:

- Debian stable – `http://ftp.debian.org/debian/dists/stable/main/binary-i386/`
- Debian unstable (didn't receive enough testing) `http://ftp.debian.org/debian/dists/unstable/main/binary-i386/`
- Also be sure to check the proposed updates – `http://ftp.debian.org/debian/dists/proposed-updates/` . It may contain IRC clients as well.

11.2. Fedora (Red Hat)

IRC Channel: #RedHat on freenode (irc.redhat.com –> irc.freenode.net)

Fedora Core 3 includes the following clients:

- EPIC4 1.0.1 – `http://download.fedora.redhat.com/pub/fedora/linux/core/3/i386/os/Fedora/RPM`
- KSirc from KDE Network 3.3.0 – `http://download.fedora.redhat.com/pub/fedora/linux/core/3/i386/os/Fedora/RPM`
- X–Chat 2.4.0 – `http://download.fedora.redhat.com/pub/fedora/linux/core/3/i386/os/Fedora/RPM`

- Rawhide (current development)
- `http://download.fedora.redhat.com/pub/fedora/linux/core/development/` . Use at your own risk.

11.3. Slackware

IRC Channel: #Slackware on freenode and OFTC – `http://www.oftc.net/`

Slackware – `http://www.slackware.com/` 10.0 includes the following clients:

- BitchX 1.1 – `ftp://ftp.slackware.com/pub/slackware/slackware-10.0/slackware/n/bitchx-1.1-`
- EPIC4 2.0 – `ftp://ftp.slackware.com/pub/slackware/slackware-10.0/slackware/n/epic4-2.0-i`
- irssi 0.8.9 – `ftp://ftp.slackware.com/pub/slackware/slackware-10.0/slackware/n/irssi-0.8.9-`

- KSirc from KDE Network 3.2.3 – `ftp://ftp.slackware.com/pub/slackware/slackware-10.0/slackware/kde/kdenetwor`
- X–Chat 2.0.9 – `ftp://ftp.slackware.com/pub/slackware/slackware-10.0/slackware/gnome/xchat-2`

- Slackware –current (current development)
- `ftp://ftp.slackware.com/pub/slackware/slackware-current/` . Use at your own risk.

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12. Hell and Paradise

12.1. Gods (developers)

- Thanks to all authors. Without their hard and volunteer work I'd never write it, and we'd never get our hands on Linux nor IRC.

12.2. Saints (contributors)

- See `http://www.pervalidus.net/documentation/IRC-mini-HOWTO/`

12.3. Angels (feedback)

- See above.

12.4. Devils

- Khaled Mardam-Bey must be stopped *:-)*
- 'If idiots could fly, IRC would be an airport'. I don't know who wrote that, but it makes sense. For those of you using IRC to annoy people I ordered a /kill.

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13. Revision History

- 20050107 – v0.4, fifth draft