

Instant Messenger 3.01 overview

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Software Overview

The software includes:

- ◆ Instant messaging server for FreeBSD, Linux, and Windows (hosting requirements: VDS/VPS or dedicated server).
- ◆ Client application for Windows.

Features

Overall features:

- ◆ Deep integration with a website:
 - Users can login to the messenger with the same username and password that they use at the website.
 - Links to the website's registration, password retrieval, support, and user profiles pages from the messenger.

- Displaying user's online status on the web.
- Adding another user to contacts from the browser.
- Starting private chat with another user from the browser.
- ◆ Customization (the changes bellow are available if you order custom version):
 - Custom application title and support link.
 - Custom application icon (application icon should be 32x32 pixel .ico image).
 - Custom static banner at the top of the contact list.
 - Custom skin (you can use skin builder from <http://www.almdev.com/> to create your custom skin).
- ◆ Quick features:
 - Contact list.
 - Private and public chat.
 - Audio/video in private and public chat.
 - User permissions system: super admins, admins, room owners, room admins, registered users, guests; add to admins, invite, kick, mute.
 - Ads rotation, file transfers, user search, etc.
 - Translation: the interface of the program can be translated by editing lang.txt file located at Lang/ folder (currently available languages: English, Russian).

Client application features:

- ◆ Skin support: 10+ built-in skins, animation effects support, free skin builder and skin collection are available at <http://www.almdev.com/>.
- ◆ User accounts:
 - Global user permissions: super admins, admins, registered users, guests; add to admins, kick, mute.
 - Online status: offline, online, busy, hidden, away (away status is set automatically after a certain time of inactivity).
 - Personal info: full name, gender, birthday, country, city, about.
- ◆ User search: search by user gender, age, country, city, and the last time a user was online.
- ◆ Contact list:
 - Ads rotation.
 - Groups: add, delete, change group order (move up/down), sort groups.
 - Users: add, delete, move to another group (using drag&drop or drop-down menu), sort users, show/hide offline users.
 - View online status of the contacts.

- Watch contacts (receive sound notification when a contact goes online).
- ◆ Ignore list: add, delete.
- ◆ Chat:
 - Text chat, audio/video chat.
 - File transfers.
 - Save chat in .html or .rtf format.
 - Smileys (animaged Gifs).
 - Audio: «Speex» speech codec (homepage: <http://www.speex.org/>), bitrate 4-20 kbits/sec.
 - Video: «Theora» video codec (homepage: <http://www.theora.org/>), bitrate 16-80 kbits/sec.
 - Private chat:
 - ◆ Avatars (Jpegs or animated Gifs).
 - ◆ Chat history (saved locally).
 - ◆ Offline messages.
 - ◆ Sound alerts.
 - Public chat rooms:
 - ◆ Ads rotation.
 - ◆ Chat history (kept on the server; a user can see old messages when he enters a room).
 - ◆ Expiry types: expire if empty, expire after a certain time, never expire, never expire (sticky).
 - ◆ Password protected rooms.
 - ◆ User permissions: room owners, room admins; add to admins, invite, kick, mute.

Instant messaging server features:

- ◆ System requirements:
 - Operating system: FreeBSD (recommended), Linux or Windows.
 - Hosting: VDS/VPS or dedicated server (if you don't have a suitable hosting, I can recommend <http://www.minivds.com/> as a starting point).
- ◆ Performance:
 - Bandwidth usage: please, use audio/video bitrates (4-20 kbits/sec and 8-40 kbits/sec respectively) to make your own estimates.
 - Disk usage: 80 kb/user.
 - Online user capacity: the maximum number of online users is determined by your license type and system limitations (~ 4096 for nix-based systems).

- Throughput performance: > 3000 messages per sec per 1 GHz (for maximum performance, you'll need to reduce log level and tweak *Server Load* options at the *configure* tab of the admin panel).
- ◆ Admin panel:
 - Test - test connection to the instant messaging server.
 - Query - query user online status, server status, room/user count, room/user list.
 - Start - start instant messaging server (console output will be redirected to the browser).
 - Terminate - stop instant messaging server gracefully.
 - Kill - stop instant messaging server.
 - Ad management - add/remove banners (Jpegs or animated Gifs), assign target URLs.
 - Configure - configure instant messaging server (the changes will take effect upon restart).
 - Reset - clear log, room index/data, user index/data, and instant messaging server configuration files.
 - Download - download log, room index/data, and user index/data files.

Instant Messaging Server Installation and Maintenance

Installing instant messaging server:

- ◆ Extract all files from server.zip and upload them to the server.
- ◆ Set file system permissions (only for nix-based systems):
 - Chmod 0755: server.exe, server.freebsd, server.linux.
 - Chmod 0666: files/room.dat, files/room.ind, files/serv.cfg, files/serv.loc, files/serv.log, files/user.dat, files/user.ind.
 - Chmod 0777: utils/ads/.
 - Chmod 0666: utils/ads/ads.cfg.
 - Chmod 0777: utils/tmp/.
- ◆ Password-protect admin/ folder.
- ◆ Open admin panel (admin/index.php), select *configure* tab, edit configuration if necessary, and submit form to generate configuration file (you should submit form even if you did not do any changes; otherwise those settings that you see in your browser will not be recorded to the configuration file and will not take effect).
- ◆ Open admin panel (admin/index.php) and select *start* tab to start instant messaging server (console output will be redirected to the browser).

- ◆ Configure cronjobs to make sure that the instant messaging server is restarted after system reboot. For example, the following command can be used under FreeBSD:
`/path_to_instant_messaging_server/chatserver.freebsd >/dev/null 2>&1`

Integration with the website:

- ◆ User authentication:
 - Prerequisites:
 - ◆ You need to know MySQL access information.
 - ◆ You need to know MySQL table and fields, where usernames and passwords are kept.
 - Select one of the two authentication methods by editing *External authentication* option at the *configure* tab of the admin panel.
 - If you set *External authentication* option to *yes*, then the instant messaging server will query `utils/validate.php` script to authenticate users.

Query string parameters:

- ◆ `?action=auth&username=<username>&password=<password>` to check username and password.
- ◆ `?action=auth&username=<username>` to check username only.

The script should print:

- ◆ `"c4ca4238a0b923820dcc509a6f75849b"` on success.
 - ◆ `"cfcd208495d565ef66e7dff9f98764da"` on failure.
 - If you set *External authentication* option to *no*, then the instant messaging server will authenticate users directly against MySQL database. This method is suitable if passwords are MD5-encrypted or kept in plain text.
 - *Edit MySQL options at the *configure* tab of the admin panel and customize `utils/validate.php` script if necessary.*
- ◆ Integrating with user profiles page:
 - You can link to the user profiles page from the instant messenger by editing *User profile on the web* option at the *configure* tab of the admin panel (username is passed in the query string: `?username=<username>`).
 - You can display user online status on the web (see `utils/userinfo.php` for the sample).
 - You can add links to start private chat or add user to contacts from the browser (see `utils/userinfo.php` for the sample).

Maintenance:

- ◆ To change server configuration:
 - Open admin panel (`admin/index.php`), select *configure* tab, edit

configuration, and submit form to generate configuration file.

- Select *terminate* tab or use admin menu inside the client application to stop instant messaging server.
- Select *start* tab to start instant messaging server (note that any changes to the configuration will take effect only after server restart).
- ◆ To backup data files, open admin panel (admin/index.php), select *download* tab, and download the files.

Instant messaging server configuration:

◆ General:

- *Administrative logins* - super admins (can edit admin status of other users).
- *Port* - any number above 1024.
- *External authentication* - controls whether the instant messaging server queries external script to authenticate users or authenticates them directly against MySQL database.
- *MD5-encrypted password* - force client application to encrypt password before sending it to the instant messaging server.

◆ License:

- *Code* - license code.
- *Domain* - licensed domain.

◆ Capacity:

- *Users online* - maximum number of users online (this number can't exceed the maximum permitted by your license type).
- *Users* - maximum number of registered users (this number can't exceed the maximum permitted by your license type).
- *Users in audio room* - maximum number of users in audio rooms.
- *Users in audio/video room* - maximum number of users in audio/video rooms.
- *Rooms* - maximum number of rooms.
- *Message queue* - maximum size of message queue.
- *Room history size, bytes* - maximum total size of the messages stored in public chat room.

◆ Defaults:

- *Group* - the name of the default group created upon first user login.
- *Rooms* - default room names.

◆ Guests:

- *Name prefix* - prefix to be added to guest users' usernames (you need to

make sure that guest users' usernames do not coincide with registered users' usernames; for example, you can use hyphen or other character that can't appear in registered users' usernames).

- *Guests can enter/speak* - enable/disable guest logins/messages (if these options are set to *no*, they have priority over the corresponding room settings and separate users' preferences).

◆ Log:

■ *Log level:*

- ◆ 0 - log critical errors.
- ◆ 1 - log all errors.
- ◆ 2 - log all errors and basic events.
- ◆ 3 - log all errors and events.

■ *Log file size, mb* - log file size.

■ *Log execution time* - log instant messaging server performance.

■ *Log server statistics* - log various server stats.

■ *Log to screen* - log to screen (or to the browser).

■ *Log to file* - log to file.

◆ MySQL:

■ *MySQL host* - MySQL host (defaults to `localhost`).

■ *MySQL socket (unix)* - MySQL socket (only for nix-based systems; defaults to `/tmp/mysql.sock` or leave empty).

■ *MySQL username* - MySQL username.

■ *MySQL password* - MySQL password.

■ *MySQL database* - MySQL database containing usernames and passwords.

■ *MySQL table* - MySQL table containing usernames and passwords.

■ *MySQL username column* - MySQL column containing usernames.

■ *MySQL password column* - MySQL column containing passwords.

■ *Keep alive MySQL connection* - keep alive MySQL connection.

◆ Server Load (in addition to the settings bellow, server load can be significantly influenced by *Log* options):

■ *Ads frequency (main window), sec* - interval between refreshing banner ads in the contact list.

■ *Ads frequency (rooms, default/minimum), sec* - default/minimum interval between refreshing banner ads in public chat rooms.

■ *Noop interval, sec* — interval between sending noop command (noop command is sent to check connection with the server if there is no other data transfer).

- *Send in-room count, sec* - interval between sending the number of users in public chat rooms (if set to zero, the updated number of users is sent immediately when somebody enters or leaves the room).
- *Typing notification interval, sec* - interval between sending message typing notifications.
- *Maximum number of search results* - maximum number of search results.
- *Debug mode* - make additional integrity checks.
- *Always store room/user data* - store room/user data after each modification (setting this option to *yes* will prevent data loss in case of unexpected shutdown, but will significantly increase server load).
- ◆ Threads:
 - *Service threads min/max* - minimum/maximum number of service threads.
 - *Sleep if idle, ms* - force thread to sleep if there is no incoming data.
- ◆ Uploads:
 - *Maximum file size, kb* - maximum file size.
 - *Keep files on server, min* - maximum time to keep files on server.
 - *Allow sending files to offline users* - allow sending files to offline users.
- ◆ URLs:
 - *Images (ads)* - URL of ads rotation script or a static banner (the ads controlled by this option are displayed in the main window).
 - *Images (rooms)* - default URL of ads rotation script or a static banner (the ads controlled by this option are displayed by default in public chat rooms).
 - *Registration* - URL of the registration page.
 - *Password retrieval* - URL of the password retrieval page.
 - *Send file* - URL of the file transfer script.
 - *Software update* — URL of the software download page (a user will be redirected to this URL if he tries to connect to the server with the outdated version of the client application).
 - *User authentication* - URL of the user authentication script.
 - *User profile on the web* - URL of the user profiles page.
 - *Allow editing ads in rooms* - allow editing ads from client application.
- ◆ User Permissions (if any of the options bellow is set to *no*, the corresponding action will require administrative permissions):
 - *Create rooms* - users can create rooms.
 - *Create audio rooms* - users can create audio rooms.
 - *Create audio/video rooms* - users can create audio/video rooms.
 - *Create non-expiring rooms* - users can create rooms with expiry type other

than *expire if empty*.

- *Control room advertising* — users can control room advertising.

Testing and Ordering the Software

Testing the software:

◆ Testing on your computer:

- Extract all files from server.zip file.
- Install client application on your computer.
- Set *Host* and *Port* options in the Messenger.ini file:

```
[Conn]
Host=localhost
Port=7000
```

- If you want to start several copies of the client application on a single computer, you need to set *MultiRun* option in the Messenger.ini file:

```
[Debugs]
MemCheck=0
MultiRun=1
```

- Start server (server.exe) and client application (Messenger.exe).

◆ Testing on our servers:

- Open admin panel:

◆ FreeBSD:

<http://www.freebsd.php-development.ru/demo/server/admin/>

◆ Linux:

<http://www.linux.php-development.ru/demo/server/admin/>

- Install client application on your computer.
- Set *Host* and *Port* options in the Messenger.ini file (to figure out port number, select *test* tab of the admin panel):

◆ FreeBSD:

```
[Conn]
Host=freebsd.php-development.ru
Port=<port_number>
```

◆ Linux:

```
[Conn]
Host=linux.php-development.ru
Port=<port_number>
```

- If you want to start several copies of the client application on a single computer, you need to set *MultiRun* option in the Messenger.ini file:

[Debugs]

MemCheck=0

MultiRun=1

- Start server (to start instant messaging server, select *start* tab of the admin panel) and client application (Messenger.exe).
- To test ads management, you might need to open *configure* tab, set license information, and restart server:

- ◆ FreeBSD:

```
code:000064746d78ea6a9f40c32203669223088f94bd53e528a3f8f65
04023f0791ac01409,
domain:freebsd.php-development.ru,
port:7000.
```

- ◆ Linux:

```
code:000064917751840a771f55e6046c59c6d9e345d62efe3ec31db64
a7c2df3c1fcd23345,
domain:linux.php-development.ru,
port:7000.
```

Ordering:

- ◆ Basic license (one domain, one port number, one copy of the instant messaging server, no public chat, no audio/video, no ads, up to 50 users online, up to 1000 registered users): \$50
- ◆ Custom version (custom application title and support link, custom application icon, custom images, custom skin; all graphic resources should be provided by you): +\$100
- ◆ Public chat: +\$50
- ◆ Audio in public chat: +\$50
- ◆ Audio in private chat: +\$50
- ◆ Video in public chat: +\$50
- ◆ Video in private chat: +\$50
- ◆ Ads rotation: +\$200
- ◆ Maximum number of users online/of registered users:
 - 100/2000: +\$50
 - 200/4000: +\$100
 - 350/7000: +\$150
 - 550/11000: +\$200
 - 800/16000: +\$250

- ◆ Regularly backup data files located at files/ folder.

FAQ:

- ◆ *Q: After installing instant messaging server I am able to connect it from the test tab of the admin panel, however I can't connect it from the client application.*

A: This is quite a common problem. Most likely, the connection is blocked by firewall on the server-side. You need to contact your hosting provider and ask them to open some port for incoming connections.

Future Development Plans

Under development:

- ◆ Conference mode.
- ◆ Encryption.
- ◆ Email/internal mail new message alerts.
- ◆ Scheduled events (scheduled chats/meetings).
- ◆ Spell-check.
- ◆ Web-based client application.

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