
PocketMine-MP Documentation

Release 1.7dev

Intyre

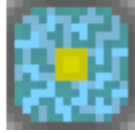
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PocketMine



PocketMine

PocketMine-MP is a server software for the Bedrock family of Minecraft editions (formerly known as Pocket Edition, Windows 10 Edition and others). It has a *Plugin API* that enables a *developer* to extend it and add new features, or change default ones.

1.1 Supported features

- Get all your friends in one server. Or run a public server.
- Disables flying, item hack, running & more. With an On/Off switch.
- Extend the game in the way you want, add awesome features.
- Teleport players, whitelist your server, tune the server, Remote Console.
- Load different levels at once, and teleport back and forth.
- Endless features, and we continuously implement new things.

1.2 Contact and Support

- [PocketMine Forums](#)
- [#pocketmine](#) for support @ chat.freenode.net

2.1 Setup requirements

- PHP 7.2 64-bit with the extensions needed for PocketMine-MP
- Latest PocketMine-MP phar compatible with your MCPE version
- Dual-core or better processor is recommended. For best performance choose high clock frequency over core count
- 1GB RAM or better

We officially try to support Windows, Linux and MacOS platforms. However, in general any platform which will run 64-bit PHP with the required extensions will work.

Error: PocketMine-MP is not supported on 32-bit systems.

Warning: Windows additionally requires *Microsoft Visual C++ 2017 Redistributable* to be installed for PHP to run.

2.2 Using <https://get.pmmp.io> (Linux/MacOS only)

Warning: Only works on Linux or MacOS.

Create a directory which you want to install PocketMine-MP into, and `cd` into it.

Then use `curl` or `wget` to install PocketMine-MP using the following command:

```
curl -sL https://get.pmmp.io | bash -s -  
wget -q -O - https://get.pmmp.io | bash -s -
```

```
[*] Found PocketMine-MP Final_1.5dev (build 1254) using API 1.12.0  
[*] This development build was released on Sat Jun 20 09:45:04 CEST 2015  
[*] Installing/updating PocketMine-MP on directory ./  
[1/3] Cleaning...  
[2/3] Downloading PocketMine-MP Final_1.5dev-1254 phar... done!  
[3/3] Obtaining PHP: detecting if build is available...  
[3/3] MacOS 64-bit PHP build available, downloading PHP_5.6.10_x86-64_MacOS.tar.gz...  
↪checking... regenerating php.ini... done  
[*] Everything done! Run ./start.sh to start PocketMine-MP
```

Error: It is recommended to run it as a **normal user** as it doesn't need further permissions.

Do not run the installer as root, this is discouraged.

Note: If the installer doesn't work for you, try *installing manually*.

2.3 Installing manually

No installer available for your platform? Did the installer fail? It is not your taste? YOLO? DIY!

2.3.1 Getting PHP for your server

1. Download your flavor PHP binary (*Downloads*)
2. Extract the PHP binary into your server directory. If everything went well, you should have a *bin* folder in your server directory.
3. (Windows only) Download and install Microsoft Visual C++ Redistributable 2017 (*Downloads*)

2.3.2 Getting PocketMine-MP

Using .phar

1. Create a new directory for PocketMine-MP.
2. Download PocketMine-MP.phar (*Downloads*)
3. Rename the .phar to PocketMine-MP.phar.
4. Place it in the PocketMine-MP directory you just created.
5. Get the start script for your platform (Windows CMD, Windows PowerShell, Linux/MacOS bash)
6. (Linux/MacOS only) Make start.sh executable (chmod +x start.sh)

Using Git

You can also run PocketMine-MP from source code by cloning the GitHub repository using Git.

PocketMine-MP uses Composer to manage its library dependencies. Composer is shipped with our prebuilt PHP packages, but if you want to install it manually, you can do so at <https://getcomposer.org>.

Clone the repository (recursively, to include submodules):

```
git clone https://github.com/pmmp/pocketmine-mp.git --recursive # don't forget the --
↳recursive flag!
```

Install dependencies using Composer

- Basic version:

```
path/to/php path/to/composer.phar install
```

- or, if you have a global Composer installation:

```
composer install
```

- or, if you're using a prebuilt PHP provided by PMMP, a wrapper for Composer is provided:

```
bin/composer install
```

If you're running a production server, you might want to skip dev dependencies and generate a faster autoloader:

```
bin/composer install --no-dev --classmap-authoritative
```

See the docs at <https://getcomposer.org> for more information on using Composer.

Warning: Remember to clone with the `--recursive` flag! PocketMine-MP has several submodules which are required to run the server.

If you forgot the `--recursive` flag when you cloned, you can `cd` into the server directory and run `git submodule update --init --recursive`.

Warning: If running a production server, consider using a phar instead for better performance.

2.4 Starting for the first time

- Linux/MacOS: run `./start.sh`
- Windows: Double-click `start.cmd`, or open PowerShell in the server directory and run `.\start.ps1`.

The first time PocketMine-MP starts, it launches a set-up wizard. This can be disabled by running `./start.sh --no-wizard`.

```
$ ./start.sh
[*] PocketMine-MP set-up wizard
[*] Please select a language:
English => en
```

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```
Español => es
ä,æ-þ => zh
PycckÐ,Ð¹ => ru
æ--¥ææ-èªž => ja
Deutsch => de
í•æêµì-´ => ko
Nederlands => nl
Français => fr
Italiano => it
Melayu => ms
Norsk => no
Svenska => sv
Suomi => fi
Türkçe => tr
[?] Language (en):
```

PocketMine-MP supports a few other languages. Fill in the two letters behind the language and press enter. Is your language not in the list? Add it on [Crowdin](#).

```
[*] English has been correctly selected.
Welcome to PocketMine-MP!
Before starting setting up your new server you have to accept the license.
PocketMine-MP is licensed under the LGPL License,
that you can read opening the LICENSE file on this folder.

This program is free software: you can redistribute it and/or modify
it under the terms of the GNU Lesser General Public License as published by
the Free Software Foundation, either version 3 of the License, or
(at your option) any later version.

[?] Do you accept the License? (y/N):
```

Do you accept the [License](#)?

```
[?] Do you want to skip the set-up wizard? (y/N):
```

You can skip the wizard from here and start the server with the default settings or continue.

```
[*] You are going to set up your server now.
[*] If you don't want to change the default value, just press Enter.
[*] You can edit them later on the server.properties file.
[?] Give a name to your server (Minecraft: PE Server):
[*] Do not change the default port value if this is your first server.
[?] Server port (19132):
[*] Choose between Creative (1) or Survival (0)
[?] Default Game mode (0):
[?] Max. online players (20):
[*] The spawn protection disallows placing/breaking blocks in the spawn zone except
↳for OPs
[?] Enable spawn protection? (Y/n):
[*] An OP is the player admin of the server. OPs can run more commands than normal
↳players
[?] OP player name (example, your game name):
[!] You will be able to add an OP user later using /op <player>
[*] The white-list only allows players in it to join.
[?] Do you want to enable the white-list? (y/N):
```

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```
[!] Query is a protocol used by different tools to get information of your server and
↳players logged in.
[!] If you disable it, you won't be able to use server lists.
[?] Do you want to disable Query? (y/N):
[*] RCON is a protocol to remote connect with the server console using a password.
[?] Do you want to enable RCON? (y/N):
[*] Getting your external IP and internal IP
[!] Your external IP is [your external IP]. You may have to port-forward to your
↳internal IP [your internal IP]
[!] Be sure to check it, if you have to forward and you skip that, no external
↳players will be able to join. [Press Enter]

[*] You have finished the set-up wizard correctly
[*] Check the Plugin Repository to add new features, minigames, or advanced
↳protection to your server
[*] PocketMine-MP will now start. Type /help to view the list of available commands.

[10:18:38] [Server thread/INFO]: Loading pocketmine.yml...
[10:18:38] [Server thread/INFO]: Loading server properties...
[10:18:38] [Server thread/INFO]: Selected English (eng) as the base language
[10:18:38] [Server thread/INFO]: Starting Minecraft: PE server version v1.1.0.55
[10:18:38] [Server thread/INFO]: Opening server on 0.0.0.0:19132
[10:18:38] [Server thread/INFO]: This server is running PocketMine-MP version 1.7dev
↳"[REDACTED]" (API 3.0.0-ALPHA7)
[10:18:38] [Server thread/INFO]: PocketMine-MP is distributed under the LGPL License
[10:18:38] [Server thread/INFO]: Loading recipes...
[10:18:38] [Server thread/INFO]: Loading resource packs...
[10:18:39] [Server thread/NOTICE]: Level "world" not found
[10:18:39] [Server thread/INFO]: Preparing level "world"
[10:18:39] [Server thread/NOTICE]: Spawn terrain for level "world" is being generated
↳in the background
[10:18:39] [Server thread/INFO]: Starting GS4 status listener
[10:18:39] [Server thread/INFO]: Setting query port to 19132
[10:18:39] [Server thread/INFO]: Query running on 0.0.0.0:19132
[10:18:39] [Server thread/INFO]: Default game type: Survival Mode
[10:18:39] [Server thread/INFO]: Done (59.006s)! For help, type "help" or "?"
```

The server should have started now and you should be able to join.

- *Update using the installer (Linux/MacOS only)*
- *Manually update*
 - *Update PHP binary*
 - *Updating PocketMine-MP*

3.1 Update using the installer (Linux/MacOS only)

You can also use the installer on these platforms to update your installation. Passing the `-u` flag will update the PocketMine-MP installation.

cd into your server directory. Then use `curl` or `wget` to update PocketMine-MP using the following command:

```
curl -sL https://get.pmmp.io | bash -s - -u  
wget -q -O - https://get.pmmp.io | bash -s - -u
```

3.2 Manually update

3.2.1 Update PHP binary

1. Download the PHP binary for your OS (*Downloads*)
2. Delete the `bin` directory in your server folder.
3. Extract the new PHP binary. You should see a new `bin` directory has been created.

3.2.2 Updating PocketMine-MP

Updating using .phar

This is very straightforward.

1. Delete your current PocketMine-MP.phar
2. Download the updated PocketMine-MP phar you want to use ([Downloads](#))
3. Change the name to PocketMine-MP.phar
4. Place it in the server folder

Note: Don't forget to rename the file to PocketMine-MP.phar

Updating a Git installation

If you used Git to install, updating is very simple.

cd into the server directory and run the following:

```
git pull # get the latest source from GitHub
git submodule update # update submodules to the required versions
composer install [... optional extra composer flags] # install/update dependencies,
↳ managed by Composer
```

See *Installing using Git* for more details.

Note: Previous versions of PocketMine-MP used submodules `src/spl` and `src/raklib`, which have now been removed. These submodules need to be manually deleted in your local installation.

To do so, delete the `spl` and `raklib` directories in the `src` directory, and then re-run Composer.

4.1 Default configuration files

4.1.1 server.properties

More info about the properties can be found on the [Minecraft wiki](#).

```
server-name=Minecraft: PE Server
server-port=19132
memory-limit=256M
gamemode=0
max-players=20
spawn-protection=16
white-list=off
enable-query=on
enable-rcon=off
motd=Minecraft: PE Server
announce-player-achievements=on
allow-flight=off
spawn-animals=on
spawn-mobs=on
force-gamemode=off
hardcore=off
pvp=on
difficulty=1
generator-settings=
level-name=world
level-seed=
level-type=DEFAULT
rcon.password=1T47ZUZs8L
auto-save=on
```

4.1.2 pocketmine.yml

```
# Main configuration file for PocketMine-MP
# These settings are the ones that cannot be included in server.properties
# Some of these settings are safe, others can break your server if modified,
↳incorrectly
# New settings/defaults won't appear automatically on this file when upgrading.

settings:
  #Three-letter language code for server-side localization
  #Check your language code on https://en.wikipedia.org/wiki/List_of_ISO_639-2_codes
  language: "eng"
  #Whether to send all strings translated to server locale or let the device handle,
↳them
  force-language: false
  shutdown-message: "Server closed"
  #Allow listing plugins via Query
  query-plugins: true
  #Show a console message when a plugin uses deprecated API methods
  deprecated-verbose: true
  #Enable plugin and core profiling by default
  enable-profiling: false
  #Will only add results when tick measurement is below or equal to given value,
↳(default 20)
  profile-report-trigger: 20
  #Number of AsyncTask workers.
  #Used for plugin asynchronous tasks, world generation, compression and web,
↳communication.
  #Set this approximately to your number of cores.
  #If set to auto, it'll try to detect the number of cores (or use 2)
  async-workers: auto

memory:
  #Global soft memory limit in megabytes. Set to 0 to disable
  #This will trigger low-memory-triggers and fire an event to free memory when the,
↳usage goes over this
  global-limit: 512

  #Main thread soft memory limit in megabytes. Set to 0 to disable
  #This will trigger low-memory-triggers and fire an event to free memory when the,
↳usage goes over this
  main-limit: 320

  #Period in ticks to check memory (default 1 second)
  check-rate: 20

  #Continue firing low-memory-triggers and event while on low memory
  continuous-trigger: true

  #Only if memory.continuous-trigger is enabled. Specifies the rate in memory.check-
↳rate steps (default 30 seconds)
  continuous-trigger-rate: 30

garbage-collection:
  #Period in ticks to fire the garbage collector manually (default 30 minutes), set,
↳to 0 to disable
  #This only affect the main thread. Other threads should fire their own collections
```

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```

period: 36000

#Fire asynchronous tasks to collect garbage from workers
collect-async-worker: true

#Trigger on low memory
low-memory-trigger: true

max-chunks:
#Limit of chunks to load per player, overrides chunk-sending.max-chunks
trigger-limit: 96

#Do chunk garbage collection on trigger
trigger-chunk-collect: true

#Trigger on low memory
low-memory-trigger: true

world-caches:
disable-chunk-cache: true
low-memory-trigger: true

network:
#Threshold for batching packets, in bytes. Only these packets will be compressed
#Set to 0 to compress everything, -1 to disable.
batch-threshold: 256
#Compression level used when sending batched packets. Higher = more CPU, less
↪bandwidth usage
compression-level: 7
#Use AsyncTasks for compression. Adds half/one tick delay, less CPU load on main
↪thread
async-compression: false
#Experimental, only for Windows. Tries to use UPnP to automatically port forward
upnp-forwarding: false

debug:
#If > 1, it will show debug messages in the console
level: 1
#Enables /status, /gc
commands: false

level-settings:
#The default format that levels will use when created
default-format: mcregion
#If true, converts from a format that is not the default to the default format on
↪load
#NOTE: This is currently not implemented
convert-format: false
#Automatically change levels tick rate to maintain 20 ticks per second
auto-tick-rate: true
auto-tick-rate-limit: 20
#Sets the base tick rate (1 = 20 ticks per second, 2 = 10 ticks per second, etc.)
base-tick-rate: 1
#Tick all players each tick even when other settings disallow this.
always-tick-players: false

```

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```
chunk-sending:
  #Amount of chunks sent to players per tick
  per-tick: 4
  #Amount of chunks sent around each player
  max-chunks: 192
  #Amount of chunks that need to be sent before spawning the player
  spawn-threshold: 56
  #Save a serialized copy of the chunk in memory for faster sending
  #Useful in mostly-static worlds where lots of players join at the same time
  cache-chunks: false

chunk-ticking:
  #Max amount of chunks processed each tick
  per-tick: 40
  #Radius of chunks around a player to tick
  tick-radius: 3
  light-updates: false
  clear-tick-list: true

chunk-generation:
  #Max. amount of chunks in the waiting queue to be generated
  queue-size: 8
  #Max. amount of chunks in the waiting queue to be populated
  population-queue-size: 8

ticks-per:
  animal-spawns: 400
  monster-spawns: 1
  autosave: 6000
  cache-cleanup: 900

spawn-limits:
  monsters: 70
  animals: 15
  water-animals: 5
  ambient: 15

auto-report:
  #Send crash reports for processing
  enabled: true
  send-code: true
  send-settings: true
  send-phpinfo: false
  host: crash.pocketmine.net

anonymous-statistics:
  #Sends anonymous statistics for data aggregation, plugin usage tracking
  enabled: true
  host: stats.pocketmine.net

auto-updater:
  enabled: true
  on-update:
    warn-console: true
    warn-ops: true
  #Can be development, beta or stable.
  preferred-channel: beta
```

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```
#If using a development version, it will suggest changing the channel
suggest-channels: true
host: www.pocketmine.net

aliases:
#Examples:
#showtheversion: version
#savestop: [save-all, stop]

worlds:
#These settings will override the generator set in server.properties and allows
↔loading multiple levels
#Example:
#world:
# seed: 404
# generator: FLAT:2;7,59x1,3x3,2;1;decoration(treecount=80 grasscount=45)
```


5.1 Installation

5.1.1 Failed loading opcache.so (or other PHP extensions)

This may happen when the installer is not used or when PocketMine-MP was moved.

To fix this issue, run the following from wherever your PHP bin directory is:

```
EXTENSION_DIR=$(find "$(pwd)/bin" -name *debug-zts*)
grep -q '^extension_dir' bin/php7/bin/php.ini && sed -i'bak' "s{^extension_dir=.*
↪{extension_dir=\"${EXTENSION_DIR}\"} bin/php7/bin/php.ini || echo "extension_dir=\"
↪${EXTENSION_DIR}\"" >> bin/php7/bin/php.ini
```

This will locate your PHP binary's extension_dir on the disk and set it into php.ini, replacing it if it already exists, and adding it if not.

5.1.2 Can't install as user root

Warning: This script is running as root, this is discouraged. It is recommended to run it as a normal user as it doesn't need further permissions.

We recommend you to install PocketMine-MP as a normal user, not as root. Create one if you don't have one.

```
useradd -d /home/pocketmine -m pocketmine
passwd pocketmine
```

5.1.3 Can I install PocketMine-MP on Windows XP?

PocketMine-MP can not be installed on Windows XP. Is it an old computer? Try Linux!

5.2 Connecting

5.2.1 Can't connect to the server after updating Minecraft

Newer versions of Minecraft Bedrock often bring breaking network changes unpredictably. If you are unable to connect after updating your version, it is likely that you need to update your server version to a newer one that supports the version you're trying to connect with.

Often, **but not always**, newer patch versions (e.g. 1.2.7, 1.2.8, 1.2.9) are compatible without any update needed. Look for the latest version which offers a version less than or equal to yours.

Run the `version` command to check the supported Minecraft version of your server.

Example:

```
for Minecraft: PE v1.2.7 (protocol version 160)
```

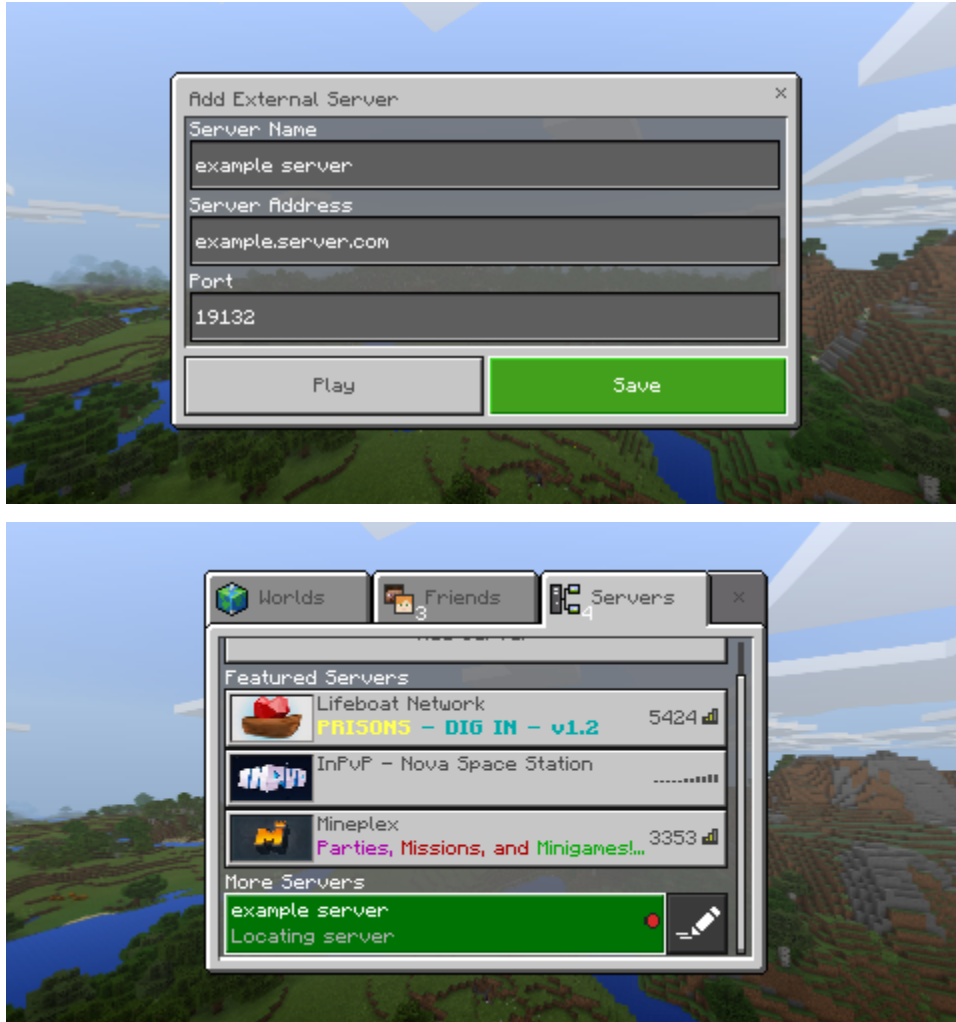
5.2.2 What does “Opening server on 0.0.0.0:19132” mean?

0.0.0.0 means “all IPv4 addresses on the local machine”. If a host has two ip addresses, 192.168.1.1 and 10.1.2.1, and a server running on the host listens on 0.0.0.0, it will be reachable at **both** of those IPs.

5.2.3 How do I add an external server which is not on my network?

To connect to a server by IP/address and port, you need to add it to the Servers list.





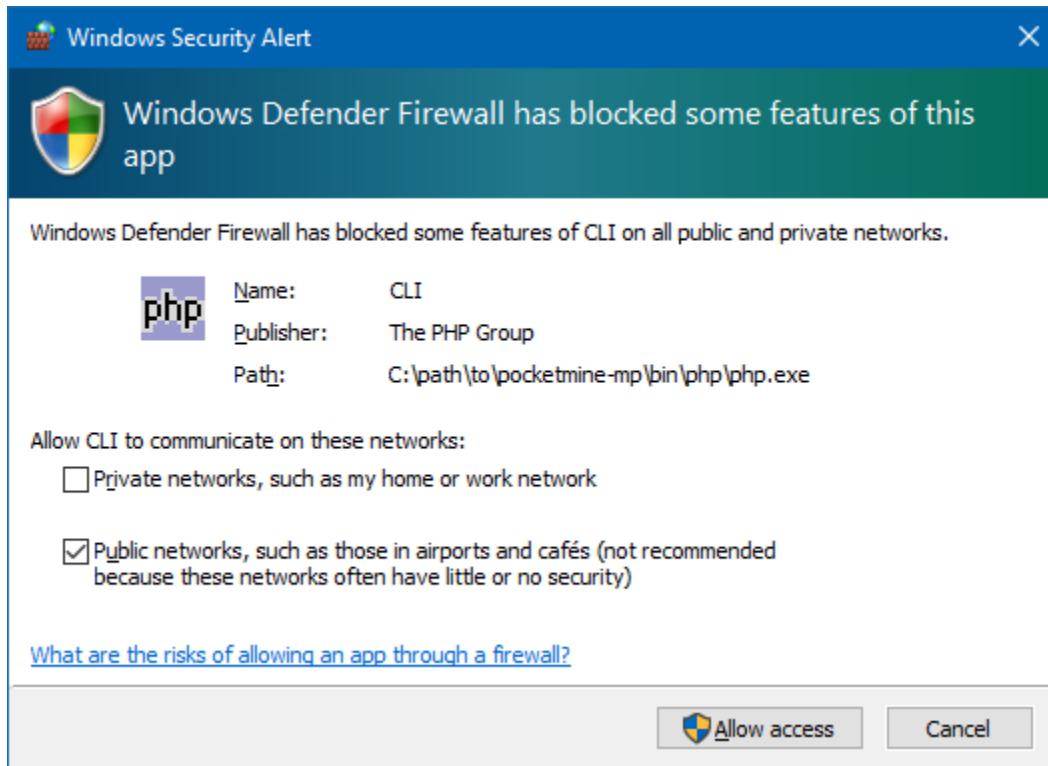
Note: A local server should show up on the Friends tab without adding the details.

5.2.4 Do I have to open ports in my firewall?

If you have a firewall set up then you need to allow access to UDP port 19132.

Note: Do you want to use **RCON**? If so, then TCP port 19132 also needs to be open.

Note: On Windows, you might get a dialog like this when you first start the server. Click “Allow access” to allow PocketMine-MP through the firewall and allow players to connect.



5.2.5 Can other users connect to my server?

Users on the same network are able to join the server. If you want other people from outside your own network to be able to join then you need to port-forward.

5.2.6 Do I have to configure port forwarding?

This is only needed when you want people from outside your network to connect. Check portforward.com or use [Google](#) to find the instructions. Use the brand and type of your router as keywords.

Note:

- UDP port: 19132 for PocketMine-MP and Query
- TCP port: 19132 for RCON

5.2.7 RakLib Thread Blocked x.x.x.x for x seconds

Timeout	Reason
5 seconds	Error on a normal MCPE packet
300 seconds	More then 5000 packets per tick from one address
600 seconds	Errors on external packet (like Query or RCON)

5.2.8 Can't connect to localhost Win10 server with Minecraft Win10 Edition

This issue occurs due to loopback restrictions on Windows 10 UWP apps. To lift this restriction, launch Windows PowerShell as an administrator and run the following:

```
CheckNetIsolation LoopbackExempt -a -n="Microsoft.MinecraftUWP_8wekyb3d8bbwe"
```

5.3 Playing

5.3.1 Why doesn't X or Y gameplay feature work on PocketMine-MP? Is it a bug?

PocketMine-MP does not have all gameplay features that Minecraft itself offers. This is because PocketMine-MP is developed by developers in their spare time who have difficulty keeping up with new Minecraft features.

Most notably, current missing features at the time of writing include mobs, redstone, minecarts and dimensions. These will be added in the future.

5.3.2 Can Minecraft: Java Edition (PC) clients connect to a PocketMine-MP server?

No, but plugins exist which add partial support for this. Look up “BigBrother” on GitHub.

5.4 Plugins

5.4.1 How do I install plugins?

PocketMine-MP plugins are usually distributed as `.phar` files (PHP Archive). Download the `.phar` file for the plugin and move it to the `plugins` folder.

5.4.2 What does “Incompatible API version” mean when loading a plugin?

This means that the version of the plugin currently installed is not compatible with the server. Check for an updated version of the plugin, ask the plugin developer to update it, or try updating it yourself.

PocketMine-MP's API frequently undergoes breaking and substantial changes. The API version exists as a way for a plugin and server to determine whether the plugin can work correctly on the server's current API.

Warning: Simply bumping the plugin's declared API version is often not enough to update a plugin. The plugin might still crash or not work as expected. Use of so-called “API updaters” is discouraged.

5.4.3 I can't get a `.phar` for a plugin. How do I create one?

You can create `.phar` files from plugin source code using the `DevTools` plugin. Instructions on how to build a `phar` from source code are given on the `README.md`.

5.4.4 Can I run a plugin from source without creating a .phar?

You can use the [DevTools](#) plugin to load source plugins (known as “folder plugins”).

Warning: It is discouraged to use either DevTools or folder plugins on a production server.

For small test plugins there is a new way, check out [this forum thread](#)

5.5 Supported MCPE Versions

To check the current PocketMine-MP supported protocol version, run the `version` command in PocketMine-MP.

Running the `version` command outputs:

```
This server is running PocketMine-MP 1.6.2dev Unleashed
implementing API version 3.0.0-ALPHA5
for Minecraft: PE v1.0.7.0 (protocol version 107)
```

The game version reported by the server is the minimum supported version. Newer **patch** versions of the game are sometimes compatible with older versions, so before asking for an updated version, try and see if you can connect to your current server first. If a version is not listed here, it usually either means that there were no protocol changes between the listed versions, so look at the newest entry before your version.

Minecraft version	Protocol version
v1.2.7.2	160
v1.2.6.55	150
v1.2.5.15	141
v1.2.5.12	140
v1.2.0.81	137
v1.2.0.31	136
v1.2.0.25	135
v1.2.0.22	134
v1.2.0.18	133
v1.2.0.11	132
v1.2.0.7	131
v1.2.0.2	130
v1.1.0.55	113
v1.1.0.9	112
v1.1.0.8	111
v1.1.0.0	110
v1.0.7.0	107
v1.0.6.0	106
v1.0.5.0	105
v1.0.4.1	102
v1.0.3.0	101
v1.0.0.0	100
v0.17.0.2	92
v0.16.0.5	91
v0.15.90.1	90
v0.15.10.0	84

Continued on next page

Table 1 – continued from previous page

Minecraft version	Protocol version
v0.15.9.0	83
v0.15.4.0	82
v0.15.0.0	81
v0.14.3.0	70
v0.14.2.0	60
v0.14.0.7	45
v0.14.0.6	44
v0.14.0.5	43
v0.14.0.4	43
v0.14.0.3	42
v0.14.0.1	41
v0.13.2.0	39
v0.13.0.4	38
v0.13.0.3	38
v0.13.0.2	37
v0.13.0.1	37
v0.11.0.14	27
v0.11.0.11	26
v0.11.0.8	25
v0.11.0.7	24
v0.11.0.5	23
v0.11.0.4	22
v0.11.0.1	21
v0.10.0.6	20
v0.10.0.1	19
v0.9.5.0	18
v0.9.0.12	17
v0.9.0.7	16
v0.9.0.2	15
v0.8.1.0	14
v0.7.4.0	12
v0.7.0.0	11
v0.6.1.0	9
v0.6.0.0	9
v0.5.0.0	8
v0.4.0.0	7
v0.3.3.0	6
v0.3.2.0	5
v0.3.0.0	4
v0.2.2.0	3
v0.2.1.0	3
v0.2.0.0	2
v0.1.3.0	
v0.1.2.0	
v0.1.1.0	
v0.1.0.0	

6.1 Contributing Code

- Use the [Pull Request system](#), your request will be checked and discussed.
- Create a single branch for that pull request
- Code using the syntax as in PocketMine-MP. See below for an example.
- The code must be clear and written in English, comments included.

Check the [Contribution Guidelines](#) on github for more information.

Thanks for contributing to PocketMine-MP!

6.2 Extending PocketMine-MP

PocketMine-MP has an API that you can use to add new things. For more information look at the [plugins](#) page.

6.3 How to use git

6.3.1 Clone PocketMine-MP

Get the clone URL from [pmmp/pocketmine-mp](#)

```
$ git clone --recursive https://github.com/pmmp/pocketmine-mp.git # clone the  
→original repository into PocketMine-MP.git  
$ cd pocketmine-mp.git # change directory to PocketMine-MP.git
```

6.3.2 How to make a pull request

Go to the [pmmp/pocketmine-mp](#) repository and hit the **Fork** button. You should now have a forked repo from [pmmp/pocketmine-mp](#) in your own repositories.



Get the clone URL from the fork and clone it into another directory:

```
$ git clone git clone <YOUR SSH/HTTPS clone URL> pocketmine-mp-fork.git # clone the_
↳original repository into PocketMine-MP-Fork.git
$ git checkout -b feature # create and switch to branch feature (it can be any name)
$ git branch # shows current branch
* feature # current branch
master
```

Make your changes to the code and commit it:

Note: Only commit changes described in the commit message

```
$ git status # check the status
$ git add <filename> # add all changed files
$ git commit -m 'description of changes' # make a commit with a message
$ git push origin feature # push to your branch
```

Take a look at GitHub and make a pull request. If the pull request is accepted and merged, you can pull the changes back into your fork.

Note: To pull from the original repository you need to add the upstream `$ git remote add upstream https://github.com/pmmp/pocketmine-mp.git`

```
$ git checkout master # switch back to the master branch
$ git fetch upstream # download latest commits from the upstream
$ git merge upstream/master # merge changes from upstream/master into your master_
↳branch
```

Remove the branch you made with

```
$ git branch -d feature # remove the branch to keep it clean
```


PocketMine is extendable!

Plugins are available on [Poggit](#) or you can make your own plugin.

Below is an skeleton with the minimal needed directories, files and content.

Note: This example was last updated for API **3.0.0-ALPHA7** and may be outdated and/or not work correctly. Please feel free to make a GitHub pull request if you find problems with it.

Note: To run plugins from source or *create .phar files* you need the [DevTools](#) plugin.

7.1 Basic plugin structure

- *Directories*
- *plugin.yml*
- *Example.php*

7.1.1 Directories

Make sure your base structure looks like this

```
PocketMine-MP
├── plugins
│   └── Example
```

(continues on next page)

```

├── plugin.yml
├── src
│   └── Example
│       └── Example.php

```

5 directories, 2 files

7.1.2 plugin.yml

This file is required in a plugin. It contains the information used by PocketMine-MP to load this plugin. It's in YAML format (you will use this format for plugin configurations). It has four required fields: name, version, api and main. Each one of these fields (and all the optional ones) are described on the plugin.yml page. Be sure that it is named exactly plugin.yml.

field	data
name	The name for your plugin
main	The namespace and classname pointing to your main plugin class. It is case sensitive
version	The version string of your plugin
api	Minimum PocketMine-MP API version required for your plugin (current)

```

name: Example
main: Example\Example
version: 1.0.0
api: 3.0.0-ALPHA7

```

7.1.3 Example.php

Now, create the main class file, that will include the PluginBase Class that starts the plugin. You can name it whatever you want, but a common way to name it is like the plugin name or Main.

```

<?php

namespace Example;

use pocketmine\plugin\PluginBase;

class Example extends PluginBase{

    public function onLoad(){
        $this->getLogger()->info("onLoad() has been called!");
    }

    public function onEnable(){
        $this->getLogger()->info("onEnable() has been called!");
    }

    public function onDisable(){
        $this->getLogger()->info("onDisable() has been called!");
    }

}

```

7.2 Create .phar files

The easiest way to release a plugin is in .phar format. To create a .phar you need [DevTools](#).

1. Start PocketMine-MP
2. Make sure the plugin is loaded. Look for Loading source plugin <plugin name>
3. Run `makeplugin <plugin name>`

The <plugin name> should be the same as the name in `plugin.yml`.

```
# Output for the Example plugin
[Server thread/INFO]: Loading source plugin Example v1.0.0
[Server thread/INFO]: [Example] onLoad() has been called!
[Server thread/INFO]: Enabling Example v1.0.0
[Server thread/INFO]: [Example] onEnable() has been called!
makeplugin Example
[Server thread/INFO]: [DevTools] Adding plugin.yml
[Server thread/INFO]: [DevTools] Adding src/Example/Example.php
[Server thread/INFO]: Phar plugin Example v1.0.0 has been created on /Pocketmine-MP/
↪dev/plugins/DevTools//Example_v1.0.0.phar
```

7.3 More examples

7.3.1 Commands

Note: This example was last updated for API **3.0.0-ALPHA7** and may be outdated and/or not work correctly. Please feel free to make a GitHub pull request if you find problems with it.

```
name: Example
main: Example\Example
version: 1.0.0
api: 3.0.0-ALPHA7

commands:
  example1:
    description: "Example1 command"
    usage: "/example1"
  example2:
    description: "Example2 command with arguments"
    usage: "/example2 <args>"
```

```
1 <?php
2
3 namespace Example;
4
5 use pocketmine\plugin\PluginBase;
6 use pocketmine\command\Command;
7 use pocketmine\command\CommandSender;
8
9 class Example extends PluginBase{
10
```

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```
11     public function onCommand(CommandSender $sender, Command $command, string $label, ↵
↵array $args) : bool{
12         switch($command->getName()){
13             case "example1":
14                 // do stuff
15                 return true;
16             case "example2":
17                 if (count($args) === 0){
18                     return false;
19                 }
20                 var_dump($args); // do stuff
21                 return true;
22         }
23
24         return false; //don't forget the return!
25     }
26 }
```

7.4 Resources

- [Plugin Development forum](#)
- [Doxygen API docs](#)

Did your server crash, or did you encounter a bug?

- Make sure you're using the latest available version of PocketMine-MP, as the bug might already have been fixed.
- Try and reproduce it **WITHOUT PLUGINS**, as plugins can frequently cause issues.
- Ask for help on our [forums](#) before creating an issue.

Warning: Please **do not** use our issue tracker for support requests, but instead seek assistance on the [forums](#). Support request issues will be closed as per the contribution guidelines.

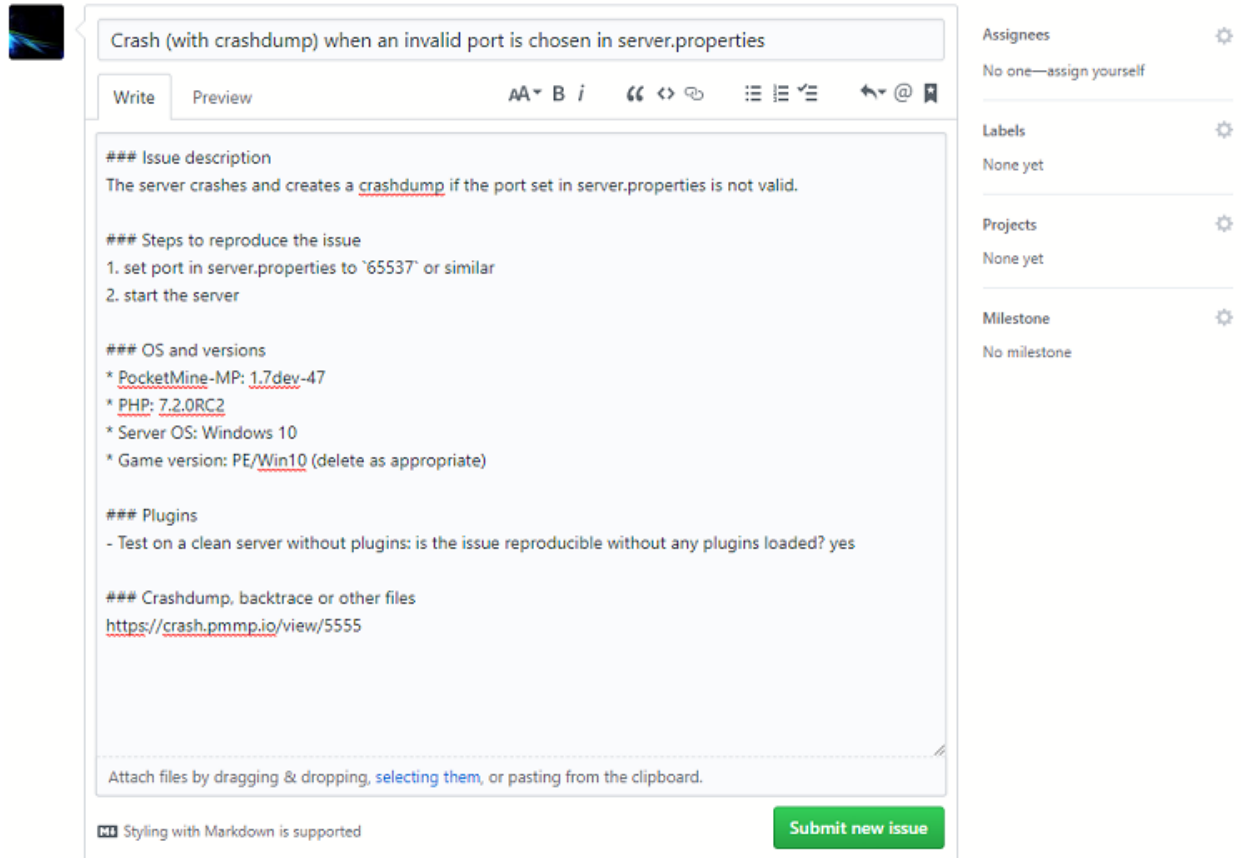
Note: Make sure you read the [contribution guidelines](#) before creating an issue.

If your issue is still unresolved and you're sure the issue is caused by PocketMine-MP itself, then [make a new issue](#) on GitHub.

8.1 Issue template

An issue template is provided, showing the information that we require for an issue submission. **Do not** just delete the template - fill it with the information it asks for. Give as much information as you can about when or what happened.

Before you open an issue please review the [contributing](#) guidelines for this repository.



The screenshot shows a GitHub issue creation form. The title is "Crash (with crashdump) when an invalid port is chosen in server.properties". The form is filled with the following content:

```
### Issue description
The server crashes and creates a crashdump if the port set in server.properties is not valid.

### Steps to reproduce the issue
1. set port in server.properties to `65537` or similar
2. start the server

### OS and versions
* PocketMine-MP: 1.7dev-47
* PHP: 7.2.0RC2
* Server OS: Windows 10
* Game version: PE/Win10 (delete as appropriate)

### Plugins
- Test on a clean server without plugins: is the issue reproducible without any plugins loaded? yes

### Crashdump, backtrace or other files
https://crash.pmmp.io/view/5555
```

At the bottom of the form, there is a note: "Attach files by dragging & dropping, selecting them, or pasting from the clipboard." and a green "Submit new issue" button. On the right side, there are settings for Assignees (No one—assign yourself), Labels (None yet), Projects (None yet), and Milestone (No milestone).

8.2 Crashdumps

Did the server crash and generate a crash dump? When the server creates a crashdump, it attempts to send it to our crash archive (unless the user disables this in their pocketmine.yml).

If it succeeds, you will see a message like this: `[18:34:15] [Server thread/EMERGENCY]: The crash dump has been automatically submitted to the Crash Archive. You can view it on https://crash.pmmp.io/view/5555 or use the ID #5555.`

When you create your issue, please include the link to your crashdump to help us diagnose the problem.

If you don't have a link but have a crashdump, you can submit it manually at <https://crash.pmmp.io/submit>

Error: Please **DO NOT** paste crashdump contents into an issue. Upload it to the [Crash Archive](#) instead.

CHAPTER 9

Contact and Support

- [PocketMine Forums](#)
- [#pocketmine](#) for support @ [chat.freenode.net](#)

10.1 Downloads

10.1.1 PocketMine-MP prebuilt phars

- [GitHub Releases](#) - Downloads of PocketMine-MP release phars can be found here.
- [Jenkins server](#) - Advanced users and/or developers may wish to use Jenkins to download development and/or pre-release builds (not recommended for most users).

Error: Please AVOID using development builds where possible.

10.1.2 Linux & MacOS installer script

- [Linux & MacOS install script source](#)

10.1.3 Prebuilt PHP binaries and related packages

Note: If there are no prebuilt binaries of the version you want available for your platform, you may be able to build your own using our [compile scripts](#).

Linux, Windows & MacOS

- [PHP 7.2](#)

Error: Windows users: Don't forget to install Microsoft Visual C++ 2017 Redistributable, or the PHP binary will not work.

10.2 Other links

- [PMMP GitHub organisation](#)
- [PocketMine-MP GitHub repository](#)
- [PHP compile scripts](#)
- [PMMP Website](#)
- [PMMP Forums](#)
- [PocketMine-MP Translation Project](#)