

# How To Make A Gmod Server

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## INTRODUCTION: WHY HOST YOUR OWN GARRY'S MOD SERVER?

Garry's Mod (GMod) has remained a sandbox phenomenon for over a decade, allowing players to create everything from simple contraptions to full-blown roleplaying worlds. While joining existing servers is fun, nothing compares to the freedom and control of running your own. Whether you want to build a private playground for friends, launch a dedicated roleplay community, or experiment with custom gamemodes, learning **how to make a GMod server** is the first step. This guide walks you through every stage—from choosing a hosting method to configuring your server for smooth, lag-free play.

Running your own GMod server isn't just about technical know-how; it's about crafting an experience. You decide the rules, the mods, and the atmosphere. With the right preparation, even a beginner can have a server up and running in under an hour. Let's dive into the practical steps.

## UNDERSTANDING THE BASICS: WHAT YOU NEED BEFORE YOU START

Before you begin setting up your Garry's Mod server, you need to understand the core requirements. A GMod server is simply a dedicated process that hosts the game world for other players to join. Here's what you'll need:

- **A copy of Garry's Mod on Steam** (the server files come free with the game, but you need it in your library).
- **A computer capable of running the server** – either your own PC (if you have a solid internet connection) or a rented virtual server (VPS/dedicated).
- **Port forwarding knowledge** – players need to connect to your IP, so your router must allow traffic on the required ports.
- **Basic familiarity with command lines** – you'll be typing commands to start and manage the server.
- **Patience for troubleshooting** – mod conflicts and firewall issues are common.

If you plan to host a server for many players (say, 20+), a dedicated hosting provider is strongly recommended. For a small group of friends, hosting from your own machine is perfectly viable.

## METHOD 1: HOSTING A GMOD SERVER ON YOUR OWN COMPUTER

This is the most common way for newcomers. It's free and gives you full control. Here's a step-by-step breakdown of **how to make a GMod server** locally.

## Step 1: Install the Dedicated Server Tools

Open your Steam library. In the "Tools" section, look for "**Garry's Mod Dedicated Server**" and install it. This downloads the server binaries separately from the game client. The installation folder is typically C:\Program Files (x86)\Steam\steamapps\common\GarrysModDS or similar.

## Step 2: Configure Your Server

Inside the server folder, create a text file named `server.cfg`. This file contains all your server settings. A basic configuration might look like this:

```
hostname "My Awesome GMod Server"
sv_password ""
rcon_password "mypassword"
sv_contact "your@email.com"
sv_tags "sandbox,fun"
maxplayers 16
mp_forcecamera 0
sv_allowcslua 1
```

Save the file in `garrysmod/cfg/server.cfg`. You can edit it later to add gamemode-specific settings.

## Step 3: Create a Launch Script

To start the server, you need a command line. Create a new text file in the main server folder (e.g., `start.bat`) and paste this line (adjust the path if needed):

```
"C:\Program Files (x86)\Steam\steamapps\common\GarrysModDS\srcds.exe" -console -game garrysmod +map gm_construct +maxplayers 16
```

Replace `gm_construct` with your preferred map. Double-click the batch file, and the server console will launch. It will take a minute to generate the map and become visible on the server list.

## Step 4: Port Forwarding

For players outside your home network to join, you must forward ports on your router. GMod server uses UDP ports **27015** (game) and **27020** (SourceTV). Log into your router's admin panel, find port forwarding, and create rules for these ports pointing to your computer's local IP address (e.g., 192.168.1.10). If you have a firewall, allow `srcds.exe` through.

## METHOD 2: USING A GAME SERVER HOSTING PROVIDER

If you want 24/7 uptime, DDoS protection, and no strain on your home internet, renting a server is the best route. Many providers offer one-click setups for Garry's Mod. The process is simpler:

1. Choose a hosting company (e.g., GTXGaming, Shockbyte, OVH).
2. Select a plan based on player slots (4-64).
3. After payment, they'll give you a control panel (like TCAdmin or Pterodactyl).
4. Use the panel to install GMod, select your gamemode (Sandbox, DarkRP, TTT, etc.), set `server.cfg` variables, and start the server.
5. Share the IP and port (usually `ip:27015`) with your friends.

With hosting, you skip port forwarding and hardware management entirely. This is ideal for **how to make a GMod server** that stays online while you sleep.

## CHOOSING AND CONFIGURING GAME MODES

GMod's magic lies in its gamemodes. By default, the server runs "Sandbox," but you can switch to any custom mode. Here's how:

## Installing Popular Game Modes

- **DarkRP** (roleplay) – Download from Steam Workshop or GitHub, place the folder in `garrysmod/addons` and set `gamemode darkrp` in `server.cfg`.
- **Trouble in Terrorist Town (TTT)** – Add the TTT addon similarly; then in console type `gamemode terrortown`.
- **Prop Hunt** – Requires the Prop Hunt gamemode addon.
- **Sandbox** – Already built-in.

Make sure to restart the server after adding new gamemodes and mods. Many developers include `.cfg` files for mode-specific settings.

## Essential Server Commands for Control

Once the server is running, you can use the console for live management. Some useful commands:

- `kick [player name]` – Remove a player.
- `banid [steamid]` – Ban by Steam ID.
- `changelevel [map]` – Switch maps without restart.
- `exec server.cfg` – Reload your config file.
- `sv_gravity [value]` – Change physics gravity (default 600).

## OPTIMIZING YOUR GMOD SERVER FOR PERFORMANCE

A laggy server drives players away. Follow these tips to keep your server smooth:

## Limit Addons and Mod Overlap

Too many addons create lag and conflicts. Use the Workshop or direct download only what's necessary. Check for duplicate content (e.g., two different weapon packs).

## Tweak Performance cvars

Add these to your server.cfg to reduce CPU load:

```
sv_minrate 60000
sv_maxrate 100000
sv_mincmdrate 30
sv_maxcmdrate 66
sv_minupdaterate 30
sv_maxupdaterate 66
fps_max 300
```

These set bandwidth and tick rate. Lower values help slower connections.

## Regular Map Rotation

Stick to optimized, workshop-friendly maps like gm\_flatgrass, gm\_construct, or custom roleplay maps. Avoid huge, unoptimized maps for low-end players.

## Hardware Recommendations

If self-hosting, ensure your PC has at least 4 GB of RAM free for 16 players. A wired Ethernet connection is mandatory. For hosted servers, choose a plan with sufficient CPU (at least 2 cores) and RAM (3-4 GB for modded games).

### SECURING YOUR SERVER: RCON, WHITELIST, AND ADMIN MODS

Unwanted troublemakers can ruin the experience. Protect your server with these measures:

- **RCON password** – Set in server.cfg; allows remote admin access via console.
- **Set a server password** (sv\_password "yourpassword") – for private servers.
- **Install ULX** – A powerful admin mod. Download it, add it to addons, then configure ulx\_groups to assign admin privileges to specific Steam IDs.
- **Use a whitelist** – Some hosting panels allow IP whitelisting. For self-hosted, you can use server plugins to allow only certain Steam groups.

- **Ban evasion prevention** – Use Steam ID bans rather than IP bans, as IPs change often.

### COMMON ISSUES AND TROUBLESHOOTING

Even with careful setup, problems arise. Here are fixes for frequent pain points:

- **Server not showing in list** – Check port forwarding, ensure you're not behind a VPN, and verify the server uses +sv\_lan 0 in launch parameters.
- **"Connection failed after 4 retries"** – Often a firewall block. Disable Windows Firewall temporarily to test, then add exceptions for port 27015 UDP.
- **Addon "Failed to mount" errors** – Delete the corrupted addon folder and redownload; ensure addons are in the correct directory.
- **Server crashes on map change** – Usually a memory issue. Lower maxplayers or remove heavy addons.
- **High ping for players** – Move the server geographically closer to your players using hosting providers with multiple locations (New York, London, Sydney).

### ADVANCED: AUTOMATING SERVER RESTARTS AND MONITORING

For a 24/7 server, consider automation:

- **Batch restart scripts** – Use a .bat file that runs the server in a loop: :start  
srcds.exe -console -game garrysmod +map gm\_construct +maxplayers 16  
goto start
- **Use a watchdog program** – Tools like "EasyCraft" or "Watchdog" can auto-restart the server if it crashes.
- **Set up a website or Discord bot** – Use APIs to show server status, player counts, and last restart time. This adds professionalism to your community.

### CONCLUSION: YOUR GMOD SERVER AWAITS

Learning **how to make a GMod server** opens up a world of creative hosting possibilities. Whether you choose to host locally for a handful of friends or rent a dedicated machine for a bustling community, the process is rewarding. Remember to start simple: get a basic sandbox server running first, then gradually add gamemodes, mods, and admin tools. With the steps outlined above—installation, configuration, port forwarding, performance tuning, and security—you have everything needed to launch a stable, enjoyable Garry's Mod server.

Don't be afraid to experiment. The GMod community thrives on innovation, and your server could become the next favorite hangout. So fire up that