

# RAT Server Manager Documentation

Version 2064

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## Table of Contents



<b>Glossary</b>	<b>2</b>
Remote Admin Tool - RAT	2
Alloc's Fixes	2
Bad Company Manager	2
Steam Command (Steam CMD)	3
<b>General RAT Questions</b>	<b>3</b>
Why does RAT not include BCM or AF tools?	3
Will RAT run on a 32 bit Windows install?	3
<b>Installation/Upgrade</b>	<b>3</b>
Pre-Requisites	3
Where do I get BCM?	3
Where do I get Allocs Fixes?	3
Where can I get more info on Alloc's webserver tools? (The live map)	4
How do I download my own dedicated server?	4
Where do I put Allocs Fixes and BCM files?	4
Which Ports Do I Need To Forward?	4
How do I download the latest experimental version of 7 Days to Die?	5
Download	5
Install	5
Update	5
EULA (End User License Agreement)	6
<b>Setup/Configuration</b>	<b>6</b>
First Startup	6
Checking the error logs	7
Help, the local server light doesn't turn green?!	7
Help, the telnet isn't green?!	8
Help, the console is filled with incorrect password messages?!	8

How do I connect to my remotely hosted server?	8
Help, the Bad Company and/or Alloc's Fixes lights don't turn green?!	8
I (or a friend) can't see my server in the server browser?	9
How does RAT save my server settings?	9
Why are my server setting changes not being saved?	9
How do I set permissions?	9
<b>Features</b>	<b>10</b>
Player Management	10
Events	10
Adding a Discord Bot	12
Grabbag	12
Teleports/Misc	13
Server Voting	13
High Ping Kicker	14
Enabling VAC (Valve Anti Cheat) Checks	15
Backups	15
<b>I need more help, where can I find it?</b>	<b>15</b>

## Glossary

### Remote Admin Tool - RAT

7D2D RAT is the 7 Days To Die Remote Admin Tool. It is a graphical user interface made by Trekkann that lets you access and manage your server either locally or remotely.

It will be called "RAT" during the rest of this document.

### Alloc's Fixes

AF or Alloc's Fixes is a tool (a 7D2D mod) made by Alloc that is required for many RAT features, including but not limited to the map, and some commands.

### Bad Company Manager

BCM or Bad Company Server Manager. It is a tool (a 7D2D mod) made by StompyNZ that is required for RAT to function.

## Steam Command (Steam CMD)

If you would like RAT to manage and update your game server, you will need to install SteamCMD. SteamCMD is a free utility by Steam that allows command line access to Steam in order to install game servers, etc. You can download it and install it by clicking the "Download SteamCMD" link within RAT.

Installation is simple, just install it in a folder like the above screenshot, that's it. Once the installation of SteamCMD is done, click the "Check for Update" button. This will cause RAT to check your current version and save that build ID for future checks.

Assuming that all of the above settings are correct, you can now click the "Install/Update" server button to update to the latest version of the game anytime you want. If your game server is already running, RAT will warn you and ask you if you'd like to stop the server, or abort the update process.

## General RAT Questions

### Why does RAT not include BCM or AF tools?

Because they are mods made by different people.

### Will RAT run on a 32 bit Windows install?

RAT only runs on 64 bit windows machines and there are no plans to make a 32 bit version.

## Installation/Upgrade

### Pre-Requisites

Note, RAT only works on dedicated server builds of 7 Days to die.

### Where do I get BCM?

You can get the Bad Company mod from [Stompy's GitHub page](#). Download the first .zip file available on the page.

### Where do I get Allocs Fixes?

You can get Allocs Fixes by [clicking this link](#).

Where can I get more info on Alloc's webserver tools? (The live map)

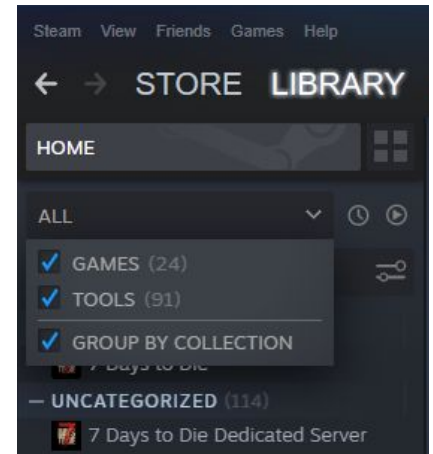
[Alloc's has a page](#) explaining how you can customise and use your webserver, including the webmap.

How do I download my own dedicated server?

Go to your steam page, click library, make sure all the boxes are checked and download the 7 Days to Die dedicated server like any other game.

(See image to the right)

You can also do this via steam command but this is more complex and I will not cover that in this FAQ.



Where do I put Allocs Fixes and BCM files?

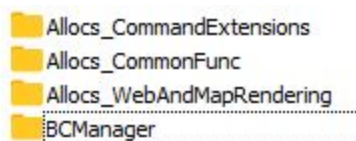
Make sure you have a dedicated server install of 7 days to die.

Then go into the dedicated server's install path's directory. This should look something like this: C:\Program Files (x86)\Steam\steamapps\common\7 Days To Die\7DaystoDieDedicatedServer

Once there, create a new folder named Mods as seen in the image to the right.  
*Any other mods you may want can be added to this folder!*



All Alloc's and Bad Company files should be unzipped and placed inside the mods folder and should look something like the image below when finished.



Which Ports Do I Need To Forward?

You will need to forward 26900 TCP + UDP, 26901-26903 UDP, 8080 TCP (only if you will use the control panel port remotely), 8081 TCP (only if you will use the telnet port remotely), 8082 TCP (only if you will let your players use the live map.)

*You can change these ports later in the config.xml, but is not recommended unless hosting multiple servers on the same machine.*

## How do I download the latest experimental version of 7 Days to Die?

Right click 7 Days to Die in your steam library, click properties, click the betas tab and then click latest\_experimental - unstable build. Do this both for your game and your dedicated server.

## Download

You can get RAT at the [JFF website](#). Once there, just click the brown download button in the upper right of the article.

## Install

Once you have RAT downloaded, simply double click the file to start the installation process.

The RAT installation is exactly like most Windows software you've installed before.

You can install RAT anywhere on your system you would like.

RAT, like many installers, needs admin access to launch successfully. If windows does not automatically prompt you to give admin powers to RAT, you should manually launch RAT as admin (right click > run as administrator).

## Update

When an update for RAT is available for download, you will see a green "Update Available!" link on the upper right of RAT. This check is only done when RAT starts up. If you would like to manually check for updates, click Help -> Check for Updates

When a new version of RAT is released, you can simply download and run RAT the same as you do for the initial installation. RAT will automatically detect if an older version is installed and prompt you for an update.

RAT will then ask you if you would like to make a backup of your RAT database before updated (It is recommended you do so). Select the folder you would like to save your backup database files.

Click the Begin Update button

RAT will perform the necessary updates to the version you are installing. Please be aware that some updates might be listed as failing, but that isn't necessarily a problem, it just depends on the current state of your database.

All logs are output for you to see. You can highlight anything in the output window and copy/paste it if you'd like to report a problem or ask a question on the update.

Once the update is complete, you will see a pop-up informing you that the update is complete and to close the update window to continue.

## EULA (End User License Agreement)

When you start RAT, you'll be presented with the EULA. This is just standard boilerplate stating that you're using this software at your own risk and that (Troy Jones, aka Trekkan) is not liable for anything that might happen. If you don't agree with the terms, you can't use RAT and it'll close.

You can also check to not show you this screen again on startup. One thing that does happen, each time RAT is updated, this screen will appear again. You can always check the box not to display the window again until the next time you update RAT.

## Setup/Configuration

### First Startup

If you are running your game server locally (on the same machine as RAT), you're probably going to want to let RAT configure your game server and manage it for you. This isn't necessary and you can run your game server and only connect to RAT via telnet, but you do lose out on a lot of features for locally running your server. (Configuration, Restarts, Health checks, backups, etc)

Before you start making changes to any of the settings, the general rule should be: If you aren't sure what the setting should be, leave the default!

- Go to the server settings tab
  - In the health checks tab
    - Make sure keep alive is off (very important)
  - In the server config tab
    - Tick the enable local server box.
    - Make sure your server path is correct.
  - In the connections tab
    - Fill out the port, name, URL, description in the server section.
    - Enable telnet and fill out that information and tick the show terminal window box.(Only use the terminal window when building a random gen map or you are having issues)
    - Enable the control panel only if you are going to use it remotely.

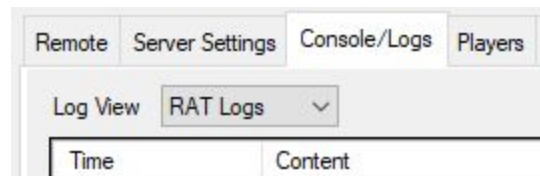
- In the game settings 1 and 2 tabs, fill out all the necessary information. This is where the information for the server config.xml will be written from.
- Go to the Remote tab
  - Make sure to tick the use server settings box
- Click the start server button
- Click the connect button in the upper left of RAT and everything should slowly start.

## Checking the error logs

If you launched your server with RAT, your logs will be located in your server directory in the logs folder.

If you launched your server with startdedicated.bat (for example, for debugging), your logs will be located in your server directory in the 7DaysToDieServer\_Data folder. They will be named output\_log\_.\*.

You can also see recent error logs in the console/logs tab and choose RAT logs from the dropdown.



## Help, the local server light doesn't turn green?!

This is probably due to you not telling RAT where your server files are located. Make sure that you have given RAT the right directory in the "server path" field.

If you cannot see an issue with the server path field above, check if the server actually launches.

To do this go in your server directory and launch "startdedicated.bat".

Now open task manager (CTRL+SHIFT+ESC) and check in the details tab to see if your server is starting up properly. Make sure you look for more than 30 seconds to make sure that the server runs properly.

If the server crashes (the process disappears), go check [the most recent log](#).

For example, a common error is using special characters in your game name, which would translate to:

2018-12-13T20:13:21 0.186 ERR Error parsing configfile: GameName is empty or contains invalid characters in the log file.

If you cannot identify the issue, it is recommended you verify your files with steam, if this still does not work, rename your serverconfig.xml file and then reverify your files with steam. This should reset your server config to default. After having done this try to launch again.

## Help, the telnet isn't green?!

If your telnet light is yellow (or red if you have auto-connect turned off), it means it cannot connect to your server.

Make sure you haven't edited the passwords in the wrong place (see question below) and check the console to see if there are any messages that you can see there that would help understand this issue.

Also, make sure that RAT isn't just continuously restarting your server. To do this, open your task manager, and you should see the 7daystodierserver process disappearing every few seconds, if so check the section above this one.

## Help, the console is filled with incorrect password messages?!

Make sure your telnet password in RAT corresponds to the password you have set up in your serverconfig.xml file.

## How do I connect to my remotely hosted server?

The remote tab is where you will set up your connection information for a remotely hosted server.

**The server settings tab will not be used at all if remotely hosting.**

Make sure the use server settings stays unticked.

Just add the IP address in the host, telnet port number and telnet port password and click connect in the upper left of RAT.

The Bad Company, Alloc's and Telnet lights should all turn green and you are connected.

## Help, the Bad Company and/or Alloc's Fixes lights don't turn green?!

This is probably due to the previously mentioned mods not being properly installed or being out of date. [Go here](#) and make sure that both Alloc's Fixes and Bad Company are up to date.

You can click Tools -> Requery Mod List to have RAT attempt to detect the mods again.



## I (or a friend) can't see my server in the server browser?

1. Wait a bit, sometimes the server browser takes a bit of time to update.
2. Make sure you have allowed RAT through your computer and router (if your router has one) firewalls.
3. Make sure you have properly forwarded the ports [mentioned here](#).

## How does RAT save my server settings?

RAT automatically saves your server settings in the database when you make changes to your server settings. You can, if you so desire, save the settings manually in the FILE menu (FILE>SAVE).

However, when you launch your server, RAT overwrites your serverconfig.xml file with the settings in the database.

You can manually overwrite your XML file at any time by clicking the write config button in the Server Settings > Server Configuration tab.

You should not need to do this in normal use cases, however.

## Why are my server setting changes not being saved?

There are rare cases of RAT not having access to save files. If RAT does not seem to save your settings, reinstall RAT using the for current user option, not all users.

## How do I set permissions?

In 7 Days to Die, permissions decrease with authority. 0 is the server owner, then as the number gets higher, you will be able to assign less and less rights. RAT uses this same principle.

For example:

0 = host

1 = admins

2 = moderators

3 = supporters/premium members

4 = active community members

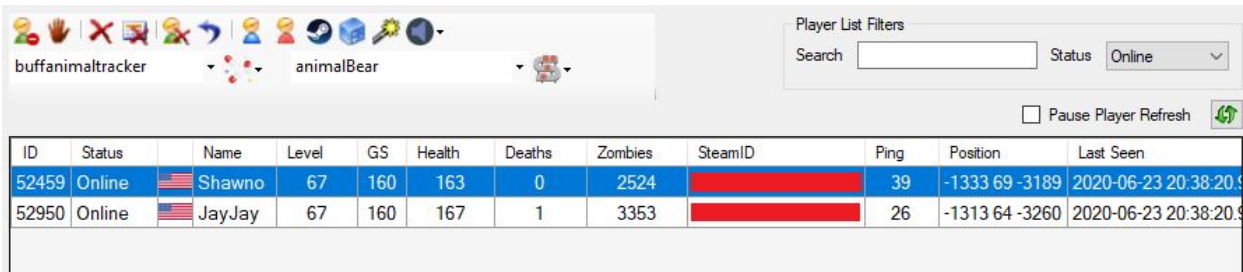
1000 = default regular players

# Features

## Player Management

Keep tabs on players and quickly see vital information. Select online, offline or all players view. Kick, ban, view steam profile page or spawn items into their backpack.

(Sometimes, the RAT item database is not in sync with your servers'. To fix this you have to click on tools > Import items/blocks.)



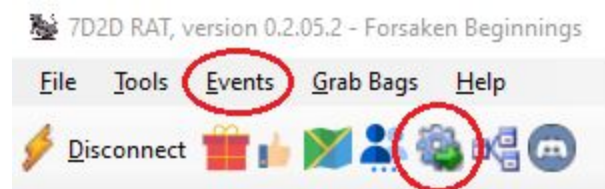
ID	Status	Name	Level	GS	Health	Deaths	Zombies	SteamID	Ping	Position	Last Seen
52459	Online	Shawno	67	160	163	0	2524		39	-1333 69 -3189	2020-06-23 20:38:20.9
52950	Online	JayJay	67	160	167	1	3353		26	-1313 64 -3260	2020-06-23 20:38:20.9

Move players to other players or to predefined locations.

## Events

The events system in RAT allows you to use custom commands to do a wide variety of things. It is very powerful. BadPlayer has shown a great number of custom commands in [this JFF forum post](#). Trekkan has also outlined some of the basics in the [event editor in the JFF forums](#).

You can get to the event editor by clicking either of the red highlighted areas. This will bring up the event editor in a separate screen.



The icons at the top of the event editor window is where you add, remove and duplicate events.



Add New  
Event



Delete  
Event



Save  
Event



Cancel  
Event  
Changes



Duplicate  
Event



Import  
Event



Export  
Event

Event List		
Type	Name	Order
Airdrop Spawned	Airdrop Spawned	1
	Airdrop Spawned	1
Backup Completed	7D2D Server Backup Completed	1
	7D2D Server Backup Completed	1
Backup Failed	7D2D Server Backup Failed!	1
	7D2D Server Backup Failed!	1
Backup Started	7D2D Server Backup Started	1
	7D2D Server Backup Started	1
Discord Connected	Discord Connected	1
	Discord Connected	1
Discord Disconnected	Discord Disconnected	1
	Discord Disconnected	1
Discord Public Chat	Bank Add Funds	1
	Bank Check Funds	1
	Check users discord role	1
	Discord Chat to Game	1
	Discord Status Change	1
	Donor Add	1
	Jail Arrest From Discord	1
	Jail Release From Discord	1
	Online Players	1
	Poop Potatos	1
	Reinstate Tele From Discord	1
	Remove Tele From Discord	1
	Shutdown Stop	1
	Teleport Player To Safehouse	1
	Test Online Players No Embed	1
	Test Status	1
	Test Top	1
	Time Check	1

On the left side of the event editor is the event list. This is where all your commands live.

The greyed out commands are disabled and the black events are active. Each command is listed in alphabetical order in the event it lives in.

To edit an event, just click on it. (Note that default events are uneditable.)

You can disable a default event, duplicate it, change it and enable your new event to make it work for you.)

Trekkan has written about the [event types in the JFF forum](#).

Below is where you actually edit your events.

Event Editor

Enabled ☒

Advanced Script ☐

Is Server Event ☒

Name

Order

Type Player Any Chat

Source User

Description

Conditionals 

STARTSWITH:/hunt|COOLDOWN:12H

Script 

sayplayer {player\_teamid} "[00FF00] I hope your ready. You gotta be quick! You can only use this once a day."  
RANDOMNUMBER: 82,84  
se {player\_id} {random\_number}  
RANDOMNUMBER: 82,85  
se {player\_id} {random\_number}  
RANDOMNUMBER: 89,92  
se {player\_id} {random\_number}

Conditionals

CONTAINS

STARTSWITH

ENDSWITH

ALEVEL

PLEVEL

COOLDOWN

CHECKDISCORDROL

EQUALS

CSEQUALS

ISFRIEND

NOTISFRIEND

HASFUNDS

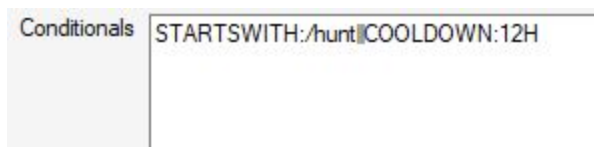
Aliases

Description

Example

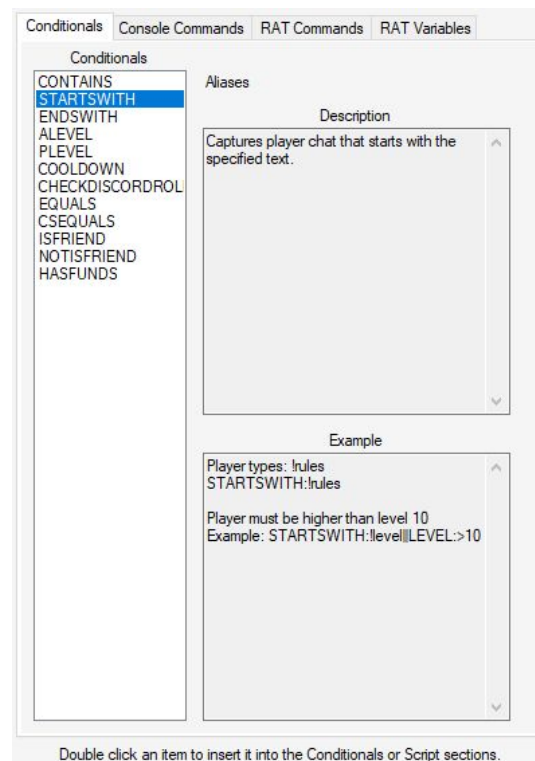
Double click an item to insert it into the Conditionals or Script sections.

Page 11/15 RAT Documentation  
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If you want to change the prefix for your commands, you will do it in the conditionals section. Just change the / to whatever character you want. You will have to do this for all your active commands.

The conditionals, console commands, [RAT commands](#) and [RAT variables](#) sections all have important functions in the creation of commands.



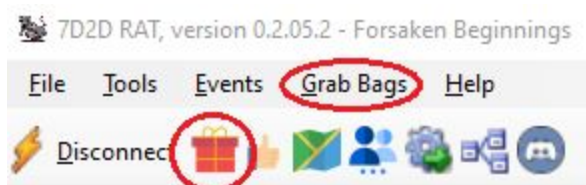
## Adding a Discord Bot

A [doc on the official JFF forum](#) has been created to guide you through the process of making a discord bot. This is a powerful tool for moderators and admins as almost any in game command can be mapped as a discord command. Making remote administration of your 7 days server possible.

## Grabbag

You can get to the grabbag editor either by the link or icon at the top left of RAT.

The grabbag system is robust and you can do a lot with it. The ability to reward your players with various different bags, each with a different spawn probability.



[Trekkan wrote an article on how to use it in the JFF forums.](#)

Make sure you enable the grabbag event in the event editor.

## Teleports/Misc

The teleports/misc tab is where you enable teleports, time between teleports and max destinations per player.

You will also set up the public teleports here and any other teleports that you need to be part of a command.

Here you will also configure your bank options if you want to start a currency system.

[ Teleport Options ]

Enabled ☒

Time between teleports  minutes

Max Destinations per Player

Teleport Destinations

Destination Name	Coordinates
safehouse	-1369 76 -3144
horde	-375 -1 897
exit	-346 39 897
jail	-1376 85 -3157
east	5546 43 196
south	-563 36 -5433

+

×

Coords Format: XXXX XXXX XXXX

[ Currency / Bank ]

☒ Enabled

Duke exchange rate  %

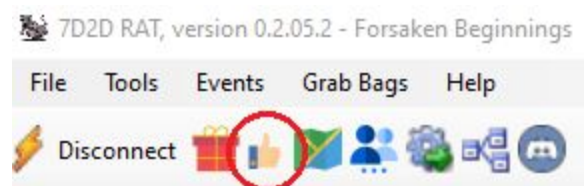
Maximum currency per player

## Server Voting

Server voting is another great way to reward players.

Register your server at [7daystodie-servers](#) and get an API key from them.

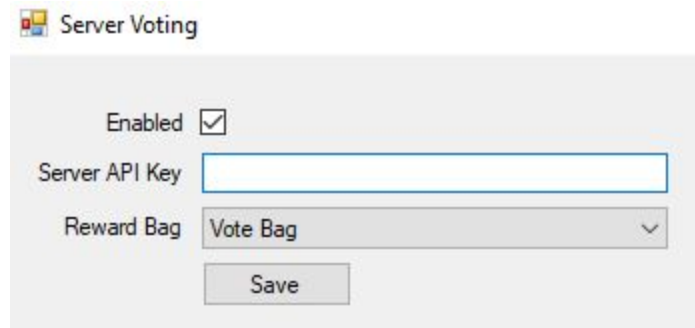
Enable voting by ticking the enabled box, add your API key, pick your reward from the drop down and click save.



Note that the vote reward comes from the grabbag list. You can make a completely separate bag for voting.

Don't forget to enable the grabbag event so your players can take advantage.

You can also keep tabs on who voted, when they voted and if they claimed their vote in the vote list section.



Server Voting

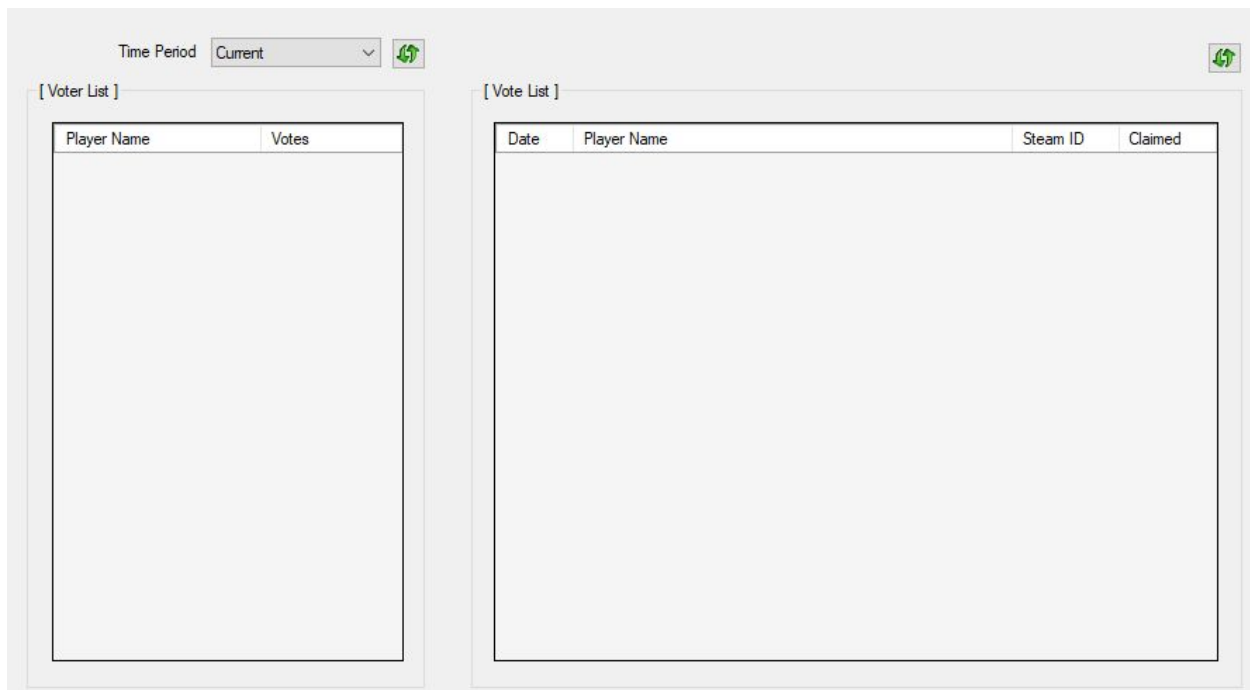
Enabled ☒


Server API Key

Reward Bag Vote Bag

Save


The voter list section shows you how many times each player voted for the current and previous month.



Time Period Current 

[ Voter List ]

Player Name	Votes
-------------	-------

[ Voter List ] 

Date	Player Name	Steam ID	Claimed
------	-------------	----------	---------

## High Ping Kicker

Go in the security tab and enable the ping checker and fill out the appropriate

This should speak for itself, but every time between checks, the server will look at the ping of all the players and if a player has over maximum ping during failures before action number of checks, he will be kicked.

In this scenario, if a player has more than 150 ping for 3 consecutive checks occurring at an interval of 1 second each, the player will be kicked.

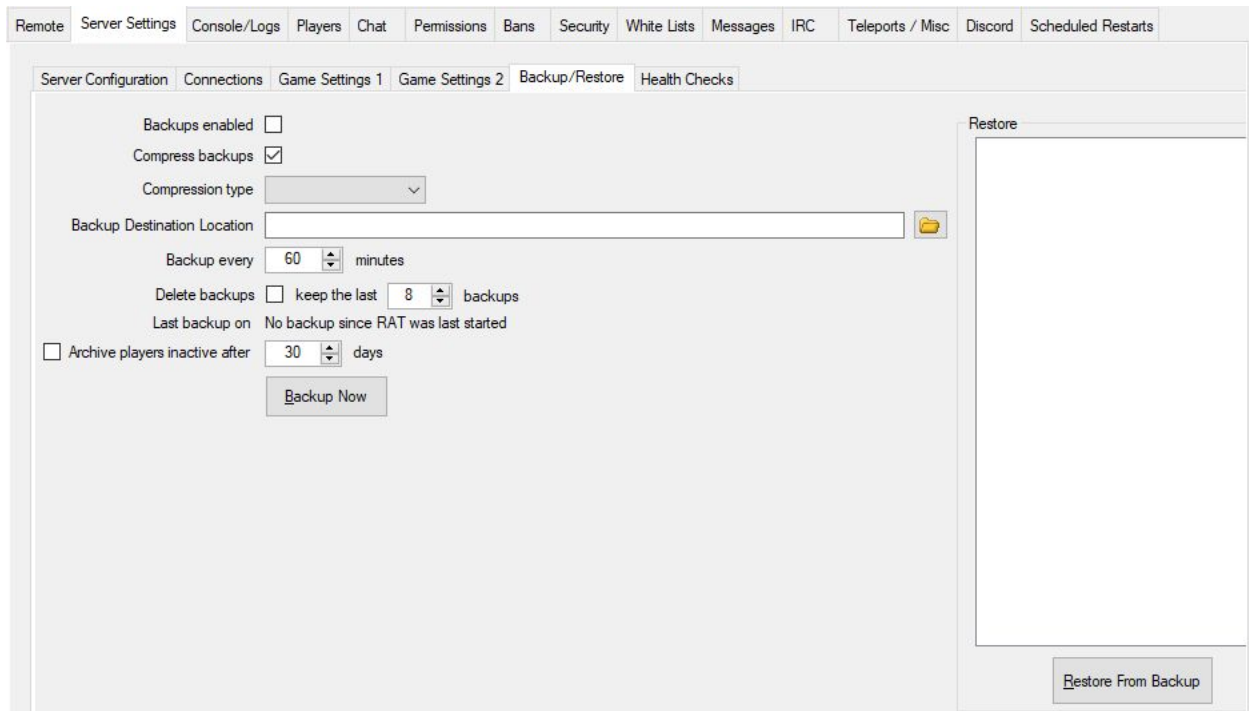
You can also edit the player failed ping check event to change what happens to players who fail a ping check.

## Enabling VAC (Valve Anti Cheat) Checks

First, [obtain a steam web api key](#). Then all you have to do is enter the key in the security tab in RAT and click on the checkbox to enable VAC checks.

## Backups

In any normal use case, there is nothing special you have to do for backups to work. Just fill out the settings in the backup/restore tab.

The screenshot shows the 'Backup/Restore' tab in the RAT interface. The top navigation bar includes 'Remote', 'Server Settings', 'Console/Logs', 'Players', 'Chat', 'Permissions', 'Bans', 'Security', 'White Lists', 'Messages', 'IRC', 'Teleports / Misc', 'Discord', and 'Scheduled Restarts'. Below this, the 'Backup/Restore' sub-tab is active, showing settings for 'Server Configuration', 'Connections', 'Game Settings 1', 'Game Settings 2', 'Backup/Restore', and 'Health Checks'. The 'Backup/Restore' section contains: 'Backups enabled' (checkbox), 'Compress backups' (checked checkbox), 'Compression type' (dropdown menu), 'Backup Destination Location' (text field with a folder icon), 'Backup every' (60 minutes), 'Delete backups' (checkbox) with 'keep the last 8 backups', 'Last backup on' (No backup since RAT was last started), 'Archive players inactive after' (30 days), and a 'Backup Now' button. On the right, there is a 'Restore' section with a large empty box and a 'Restore From Backup' button at the bottom.

When using RWG after your world has been generated and you have entered your world at least once, then in RAT under server settings >> game settings 1, set the “game world name” and if not automatically done, also set the “save game name” to the maps name instead of RWG. Backups will work after that.

**NOTE: If your map does not show, then you can click the green refresh icon in game settings 1**

## I need more help, where can I find it?

If you need anymore help, you can ask others who also use this tool (including the creators of both RAT and BCM) questions in the [official JFF discord](#) or in the [official JFF forums](#).

To get the best service, the JFF Discord is the preferred means of support.