1.14 Community Anti-Hack Datapack

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INTRODUCTION

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The 1.14 Community Anti-Hack Datapack (CoAH for short) is an open sourced attempt to bypass the use of hacks (modded clients) by using commands to thwart them. It is not possible to prevent hacks. However it is definitely possible to detect them and run our own methods of stopping the offenders from getting away with it.

CoAH is intended for anyone to be able to use and modify at anytime! I have even included an uninstall function file to remove CoAH if anyone tries it out and does not want it.

This Doc is a supplementary resource for discussion and theory crafting new ways to combat hacks.

If you are here to assist in development, feel free to edit anything in this Doc freely! Changes will not apply without Admin permission, so progress cannot be lost! It is possible to edit this Doc from any device, there are just different ways to go about it.

Feel free to select a word, sentence, or paragraph and right click on it to leave a comment to open a bit to discussion!

NOTE: Contributors must follow the layout of the document with the proper formatting.

- 1. Command suggestions MUST have 1 line of space between the next and previous line and left justified.
- 2. Function File names MUST be centered and use the "Heading1" Style formatting in Dark Green.
- 3. Any tags or scoreboards MUST use "coah." at the beginning of their name to prevent conflicts with other datapack's commands.
- 4. Please include tags and scoreboards you create to the uninstall.mcfunction segment.
- 5. Non-commands inside of the Doc can be preceded by "//" to generally discuss the specified hack.

These guidelines are to keep things organized and nothing more.

Contributors can add their handle to the list of contributors below. If you want credit you must do this yourself and I will verify it by the edits I see you have contributed!

CONTRIBUTORS

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NOTES/DISCUSSION

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DISCORD: https://discord.gg/6aKFy6C
GITHUB: https://github.com/TheNuclearNexus/Community-Anti-Hack

Talk freely here in-Doc about anything relating to the datapack. It could be questions, concerns, opinions, progress, suggestions etc... It is handy to address everything when building forward!

Be sure to select text in order to leave a comment. Right click your selected text if you are on PC!

Click any highlighted text to read the conversation about the highlighted text!

To easily remove those obnoxious page breaks, just click "View" and uncheck "Print Layout".

If you are on PC, you can click "View" at the top and click "Show Document Outline" to have a clickable index on the left of your window! :D

I3ladeDragon - I know it's impossible to prevent the hacks from running. But commands give us unique tools we can use to combat them. Just need to think outside the box!

I3ladeDragon - We can probably use the new "/schedule" command effectively!

4P5 - I've written up an outline for how I think each cheat could be detected. Feel free to add suggestions, or use a better idea.

tryashtar - Fixed some redundant executes. Please do not include me in any final credits.

YMbrothers - I'll just wait for the server to go online. It's way easier to test it live.

I3ladeDragon - I have massively repurposed and overhauled the Doc with a lot of new hacks. I also made it easier to navigate and added descriptions of what to expect to look for when finding how to detect hacks. We have a <u>Discord</u> and <u>GitHub</u> now too!!!

YMbrothers - Hey, it kinda sucks if all the contributors need a github account to request a change. How about we tell people who cannot use Github to continue writing the possible command below, and let our lovely TheNuclearNexus to change them in the Github file?

setup/init.mcfunction

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init.mcfunction

//

setup/main.mcfunction

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main.mcfunction

//

admin/commands/main.mcfunction

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main.mcfunction

// We can either find a way to automatically give admins the "coah.admin" tag... or at least let them know to add the tag to their admins first thing. I wish there were a way for commands to detect for OP. Does the /data command allow us to see if a player is op or not?

admin/commands/get_user.mcfunction

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get_user.mcfunction

admin/commands/list_users.mcfunction

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list users.mcfunction

//

admin/commands/tp_to.mcfunction

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tp_to.mcfunction

//

admin/notify_fly.mcfunction

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notify fly.mcfunction

//

admin/notify_fly100.mcfunction

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notify_fly_100.mcfunction

//

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notify xray.mcfunction

//

hack/gamemode.mcfunction

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gamemode.mcfunction

//

hack/xray.mcfunction

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xray.mcfunction

How to detect? If you see a player mining directly to an ore and next he suddenly change their direction when he reaches the target, and next he found another ore (diamond for example), that's a reason to suspect.

// There is a way to detect if someone is directly viewing a specific block, even through other blocks. I use this method to prevent Enderchest placement on my server (reasons). We may be able to adapt it to detect if someone keeps looking directly at diamond that is too far away for an extended period of time. Just using the "facing" command can be powerful.

hack/speed.mcfunction

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How to detect? First, check if the player don't have speed potion/effect. If not, watch him walking and running. If he moves very fast, he is using Speed hacks.

// I believe there is a walk speed statistic. Check if the player has speed, then do some fancy calculator stuff.

// on second thought, walk speed may not be affected by hacks. Again, make a timer and check blocks walked.

//that may also not work since players may be allowed to teleport around (to spawn or something like that) and that would give them a big distance in a short time.

hack/killaura.mcfunction

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How to detect? It's very easy to detect. If you see players spinning their heads and hitting fast without failing a single hit, that is kill aura. Even easier to spot if he is fighting more than 1 player, because he will be spinning from one side to another attacking both of the players. Attention: sometimes, if the player is lagging, it's hard to say if he is really hacking.

// Damage dealt in a second?

hack/fly.mcfunction

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fly.mcfunction

How to detect? Just open your eyes. If you have a survivor server and you see people flying that's not normal. The only one problem is the lag, sometimes when the people are lagging they float a bit over the floor, but if they are going up and down and moving without problems that's surely hacks. If you see the normal walking particles behind their feet when they walk on the air they are probably just lagging.

//if the y coordinate rises or stays the same over several ticks then OnGround:0b could work // add a timer here, and test if the player has air under them and is not using slow falling, elytra etc

// there is an nbt tag for flying, but I'm not sure if hacks would use that. //Idk, but let's give this a try:

tag @a[gamemode=survival,nbt={abilities:{flying:1b}}] add CADfly

tag @a[gamemode=adventure,nbt={abilities:{flying:1b}}] add CADfly

hack/jesus.mcfunction

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jesus.mcfunction

How to detect? Watch the player and see if he can walk fast on the water.

// check if player has been standing directly on water for too long
// We can probably use the "align" segment of the execute command to check for players
position relative to a full water block. Then we can use "/schedule" to check and increment a
score value for how long they are walking on water. Once they pass a threshold in the score
value, they can get flagged. Otherwise the score can get reset.

//If I recall, the Jesus hack is simply flying on water. You never saw them jumping on water, and you never see them having different movement speed on water as well.

hack/aimbot.mcfunction

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How to detect? Very easy to detect. If the player spins around you and doesn't miss a single hit it's probably aimbot. Even easier to spot if he is fighting more than 1 player, just like Kill aura.

//

hack/anti_fire.mcfunction

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How to detect? First, check if the player does not have fire resistance potion. If not and he does not take damage from fire, he is hacking.

hack/anti_knockback.mcfunction

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How to detect? It's very easy to detect. Hit a player and if he does not take knockback it's because he is hacking. Before reporting, I recommend you to see if the player was not lagging, if so it's hard to know if he is really hacking or just lagging. Also, some servers have minigames where knockback is disabled, so check the games rules before accusing someone of anti-kb.

//

hack/auto_armor.mcfunction

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How to detect? If you are in PvP and you break someone's armor, he should stop fighting to equip the new armor, right? But if you break someone's armor and a new one appears in the place of the other while the player hasn't stopped to equip it, that's probably Auto-armor.

//

hack/blink.mcfunction

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How to detect? Blink is like a fake-lag hack. The player can teleport. Very hard to spot.

//

hack/criticals.mcfunction

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How to detect? It's hard to detect Crits hack. If you see the player dealing more damage than usual without jumping and hitting, it can be Criticals hack.

//

hack/dolphin.mcfunction

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How to detect? Dolphin is basically where a player is in the water and can be seen taking large or small jumps forward. Kind of like how a dolphin dives underwater and jumps out. Hence the name "Dolphin".

//

hack/glide.mcfunction

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How to detect? If you see someone gliding without Elytra it's because he is hacking.

//

hack/fast_eat.mcfunction

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How to detect? If the player eat too fast, you can tell that it's fast eat.

//

hack/fast_ladder.mcfunction

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How to detect? If the player climbs the ladder with an unusual speed (like if he was flying on creative mode) it's probably fast ladder.

//

hack/rapid_fire.mcfunction

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How to detect? Easy to detect. There aren't any machine guns on vanilla minecraft, so if you see someone shooting very fast that's Fast bow hack.

//

hack/no_slowdown.mcfunction

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How to detect? It's very easy to detect. Just watch him on PvP. He will have to drink potions or eat, so if he is running and doing it at the same time he is a hacker.

//

hack/scaffold.mcfunction

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How to detect? Player can place blocks automatically under them at walking speed. Common w/ Skywars hackers.

//

hack/spider.mcfunction

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How to detect? When the people climbs walls without a ladder, they are using Spider hack.

//

hack/step.mcfunction

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How to detect? Player can get on top of blocks that are 1 block high without jumping. Hard to spot.

//

hack/regen.mcfunction

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How to detect? It's a little bit hard to detect without using Damage Indicators mod/plugin. If you are using one of them, it's easy to see that the player does not take almost any damage. If you aren't using a mod/plugin, you can eat a god apple and try to kill him. If he does not die, probably he is using regen hack. He can be using a God Apple, but in that case he should have particles around him, so you can tell if he is hacking or just using a God apple.

//

hack/fast sneak.mcfunction

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How to detect? Player can be seen crouching while moving at the normal speed. Very rare, but easily spotted.

hack/speed_mine.mcfunction

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How to detect? If they are breaking the blocks too much fast, they're probably using speedmine. The lag can be tricky here, because when you are lagging, the other people see you breaking a lot of blocks very fast, and next you stopping for a while, etc.

//

hack/fast_fall.mcfunction

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How to detect? If you see people falling from buildings very fast (almost like teleport) you can say that is Fast fall.

//

hack/no_fall.mcfunction

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How to detect? If the players fall from things without getting hurt, they are using No fall-damage.

//

hack/nuker.mcfunction

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How to detect? If you see a player walking around and the blocks disappearing around them, thats Nuker hack.

//

hack/fast_place.mcfunction

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How to detect? Watch the players while building, if they put blocks too much fast it's probably fast place.

//

hack/high_jump.mcfunction

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How to detect? Watch people jump. If they don't have jump boost effect/potion and they jump more than 1 block that is a hack.

//

hack/anti invis.mcfunction

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How to detect? If you are an admin that is invisible and flying, for example, and another player keeps following you he is probably using anti-invisibility hack. If you suspect that someone is using this hack, be quiet without items or armor (nothing that can cause particles) and see if he can still see you.

hack/drop_inventory.mcfunction

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How to detect? If you see people dropping items too fast, or running while they drop lots of items and the armor, he is using this hack.

//

hack/spam_chat.mcfunction

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How to detect? For example, if a player is mining or fighting and is still spamming a message, probably he's using spam hack because he can't write and fight at the same time.

//

player/main.mcfunction

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main.mcfunction

//Instead of sending the players tagged as "coah.hacker" to 0,0 should we instead freeze them in place at the position they got flagged at?

player/attributes.mcfunction

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attributes.mcfunction

player/give_id.mcfunction

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give_id.mcfunction

//

uninstall/uninstall.mcfunction

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uninstall.mcfunction

// this function file may be needed to run on repeat for several weeks to remove all tags. It will at least remove the scoreboards in a single run.