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## NxAC Setup Tutorial

This tutorial is for Nitmod **2.3** and higher!

## What is NxAC ?

NxAC is Nitmod's built-in AntiCheat tool.  
It exists since Nitmod **2.2.1**, but it has been officially released in **2.3**, including many fixes.

## How to install NxAC ?

You don't have to install it. It's built-in the mod. All you have to do is set it up properly to your own needs.

## NxAC Server setup

By default, NxAC will automatically report AntiCheat violations to everyone on the server, request a screenshot and kick/ban the cheater.  
Every violations will also be logged into the "NxAC/NxAC\_Violations.log" file.  
It is possible to modify the behaviour, as described below.

## How to customize automatic AntiCheat violations handling ?

If you want your server to automatically kick/ban cheaters, and be listed as a "cheat protected" server, you have to set the **n\_NxAC** to **1** in your server config.  
If you want your server to automatically request a screenshot, kick/ban cheaters, and be listed as a "cheat protected" server, you have to set the **n\_NxAC** to **2** in your server config.  
This is a latched cvar, which means you will have to restart the map, or wait for the next map before changes take effect.  
Once this cvar is enabled, NxAC server will automatically take actions when it detects an AntiCheat violation.  
If the **n\_NxAC** cvar is set to **0**, it will ONLY broadcast the AntiCheat violation announce to everyone on the server, and the server will **NOT** be listed as a "cheat protected" server.

Automatic kick for these violations:

- "UNKNOWN\_CLIENT\_BINARY" - NxAC has detected that this player is using an ET client that is not allowed on the server, because its SHA1 checksum wasn't found inside the "NxAC/checksums.cfg" file.
- "SUSPICIOUS\_MEMORY\_MODULE" - NxAC has detected a bad memory module loaded onto the game. In other words, this is a hack...
- "UNEXPECTED\_CVAR\_SCAN\_DATA" - NxAC Server has received an unexpected response to a Cvar Scan query.

Automatic PERMANENT ban for these violations (Undeniable evidences of cheating):

- "WALLHACK" - NxAC has detected the player is using a Wallhack.
  - "GAMEHACK" - NxAC has detected the player's game has been hacked.
- These violations will only trigger a public announce:
- "SCREENSHOT\_FAILURE" - A screenshot request has been sent to this player, and it failed.

## NxAC CVAR Scanner

NxAC can scan clients to find CVARS that should not be registered in the game (usually known cheat cvars) or find CVARS with bad values.  
To enable this feature, you must install a list of cvar rules on the server, and enable some cvars in your server config.

## Server config

**n\_NxAC\_CvarScan**: Set this CVAR to 1 to enable NxAC CVAR Scanner (Default: "0")  
**n\_NxAC\_CvarScanWait**: Delay in milliseconds before server starts sending cvar queries to a client after he has finished connecting (Default: "10000")  
**n\_NxAC\_CvarScanDelay**: Delay in milliseconds between each cvar query. Too short might cause lags or server command overflow (Default: "750")  
**n\_NxAC\_CvarScanInterval**: Delay in milliseconds before starting a new scan after the previous one has finished (Default: "300000")  
**n\_NxAC\_CvarScanMaxWarnings**: Maximum number of warnings before kicking a player who doesn't respect the cvar rules. Instant kick if set to 0. (Default: "1")

The syntax for a CVAR Scanner depends of what type of rule is used, and can look like:

- **CVARNAME RULE VALUE** (*EQ, G, L, INC and EXC rules*)
- **CVARNAME RULE VALUE1 VALUE2** (*IN, OUT, GE and LE rules*)
- **CVARNAME RULE** (*NULL rule*)

The CVAR scanner supports these rules:

- **EQ "val"**: Cvar value must be **EQUAL** to *val*
- **IN "val1" "val2"**: Cvar value must be **INSIDE** *val1* and *val2*
- **OUT "val1" "val2"**: Cvar value must be **OUTSIDE** *val1* and *val2*
- **G "val"**: Cvar value must be **GREATER** than *val*
- **GE "val"**: Cvar value must be **GREATER** than *val* or **EQUAL** to *val*
- **L "val"**: Cvar value must be **LOWER** than *val*
- **LE "val"**: Cvar value must be **LOWER** than *val* or **EQUAL** to *val*
- **INC "val"**: Cvar value must **INCLUDE** (must contain) *val*
- **EXC "val"**: Cvar value must **EXCLUDE** (must not contain) *val*
- **NULL**: Cvar must not exist, at all

## What are the CVARS to search for ?

It is recommended to search for known hack cvars only.

We do not recommend scanning for engine cvars or other original game cvars (r\_\*, cl\_\*, cg\_\*, in\_\* etc...)

It is up to you to decide which cvar rules you want to use on your server, but if you want to restrict 'normal' cvars, you should use [Nitmod's forcecvar and sv\\_cvar features](#) instead

Our official sample cvar rules list can be downloaded [here](#)

The cvarlist.cfg file must be saved as "your\_ET\_server\_folder/nitmod/NxAC/cvarlist.cfg".

## NxAC Client Checksum verification

NxAC can check client's game SHA1 checksum to disallow unknown/self compiled ET clients.  
To enable this feature, you must install a list of allowed SHA1 checksums on the server, and enable a cvar in your server config.

## Server config

**n\_NxAC\_CheckClientBinary**: Set this CVAR to 1 to enable NxAC Client Checksum verification (Default: "0")

## How to create the allowed SHA1 checksums list ?

Our official sample cvar rules list can be downloaded [here](#).

We will update this sample list when new "official" and "clean" ET clients are released (most likely, new ET-Legacy versions).

To update this list yourself, you must generate ET.exe (or etl.exe for ET-Legacy) SHA1 Checksum and add it to the list (one checksum per line).

The checksums.cfg file must be saved as "your\_ET\_server\_folder/nitmod/NxAC/checksums.cfg".