# CONAN EXILES

# TECHNICAL MANUAL

Version 1.4

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# 2    Introduction

Hello and welcome to Conan Exiles!

This technical manual contains a Survival guide that describes the basic concepts, how to set up and administrate your own dedicated server, and how to use mods and the Conan DevKit. In the game, you will find information in the settings about controls configuration to get you started.

# 3    Conan Exiles survival guide

Welcome to the Exiled Lands. In this harsh and unforgiving landscape, only the strongest and fiercest will survive the challenges that stand before them. Before you get started on your barbarian adventure we've gathered some basic tips you should learn to survive, build and dominate in Conan Exiles.

Your cross awaits.

## 3.1    Starting off

From the main menu, you can choose to play online or jump into a single player/co-op session. Playing online pits you against other exiles in a struggle for survival on servers run by Funcom's partnered server provider, or on private servers run by members of the community. In single player, it's just you against the dangers of the Exiled Lands.

In a single player game, you start off by choosing a difficulty level. This will set things like gathering rate, how much experience you gain and what you lose upon death. You can also set custom settings if you want. When playing single player, you will also have access to the admin panel, which allows you to activate certain cheats and spawn in weapons and items. If you're playing the single-player mode you have the option of inviting friends to join you through steam.

On multi-player servers, you're subject to the rules and settings of the server you choose. Only server admins can access the admin panel, and can kick and ban players as they like.

## 3.2   The HUD



The upper left hand corner is where you'll find the information you need about the current state of your character. The red bar is your Health meter. Below that is your Stamina bar. Then, going from left to right, are icons representing your current level of Water, Food, Inventory Weight and Temperature.  Just above your Health meter is your Experience Points Bar.

On-screen prompts will display any status effect currently affecting you. These can include Poison, Corruption, Thirst and Starvation.



## 3.3   Inventory and character screen



The Menu button opens your inventory and character screen. On the left side is your inventory, with everything you've gathered in the game. Here you can move items to the quick slot radial menu.

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The middle window is your character screen, where you find your character's attributes and currently equipped clothing. Above your character's head is your current level of Health, Stamina, Water, Food, Armor rating and Armor Weight.

To the right is the crafting window. Here you use the resources you've gathered to create tools, clothes, weapons, building pieces and other items. Click on any crafting recipe you have learned to see what resources you need to create what you've selected. If you have enough just hit the "Craft" button and the rest will take care of itself. Certain items, like Iron Swords, require a crafting station to make.

## 3.4    Stats and leveling up



As you level up you gain Attribute Points you can use to improve your character in various ways. The SAVAGES attributes do different things based on where you allocate your points: Strength determines your melee damage. Agility has an effect on armor and our ability to move. Vitality determines the size of your health pool. Accuracy determines the damage you do with ranged weapons. Grit determines the size of your stamina pool. Encumbrance is a measure of how much you can carry. Survival is a measure of your ability to live in harsh conditions. It affects how you metabolize food and react to your surroundings.

## 3.5    Feats

When you level up you also gain Knowledge Points. These are used to unlock feats that give you access to new crafting recipes. Each exile has a limited amount of feats they can unlock and some have

prerequisites that need to be fulfilled before they're available. The first tab in the Feats menu is a collection of some of the most common feats, so look through the other tabs to find more.

Your spent Attribute Points and Knowledge Points are permanent until you're able to craft a specific potion that lets you reset your spent points.



## 3.6   Harvesting

Harvesting resources is an essential part of the crafting and survival aspects of Conan Exiles. Resources let you craft and upgrade tools, weapons, building pieces and armor. You can harvest resources by interacting with special nodes or by picking them up off the ground.

In the beginning you gather sticks and stones, but you will eventually unlock new tools that allows you to harvest more resources at a faster rate. Some tools are specialized and can give you different things from the same resource. A Cleaver will give you more meat from an animal corpse, whereas a Skinning Knife is excellent for collecting hide.

## 3.7  Crafting

Most of the crafting in the game can be done from the crafting screen, but some items need a special crafting station or machine to be made. Crafting stations require you to manually select and craft each individual item. If a recipe requires a crafting station it will be listed in the Feats menu. These have their own inventories where the crafting is done. Machines need fuel to work, but will continuously make new items and ingredients if there's fuel to burn.

## 3.8   Building

Surviving other players and the creatures and elements of the Exiled Lands is a core part of Conan Exiles. Building a shelter is vital for survival and it's important to build something fast. Rudimentary building pieces will be available quickly and can be crafted from the crafting screen as long as you have the prerequisite materials.

Start by placing out some foundations where you want to build. You'll be able to build practically anywhere. Other building pieces will automatically snap to the foundations when you select them from your radial menu. When building it's important to consider what's surrounding you: Are there any special resource nodes nearby? Are you close to food or water? How you're going to defend yourself in said spot is also something to take into consideration.

As you grow stronger and progress through the game you'll unlock building pieces of higher tiers. These can be used to upgrade your base to further defend yourself.

## 3.9   Capturing and breaking thralls

Human NPCs in the Exiled Lands can be captured and brought back to your base to be broken on the Wheel of Pain. They then become your thralls. Thralls can be set to work at your crafting stations to unlock new recipes or speed up crafting. They can stand guard and protect you from enemies as archers or fighters. Thralls have their own inventory and need to be equipped with weapons and armor to be effective warriors.
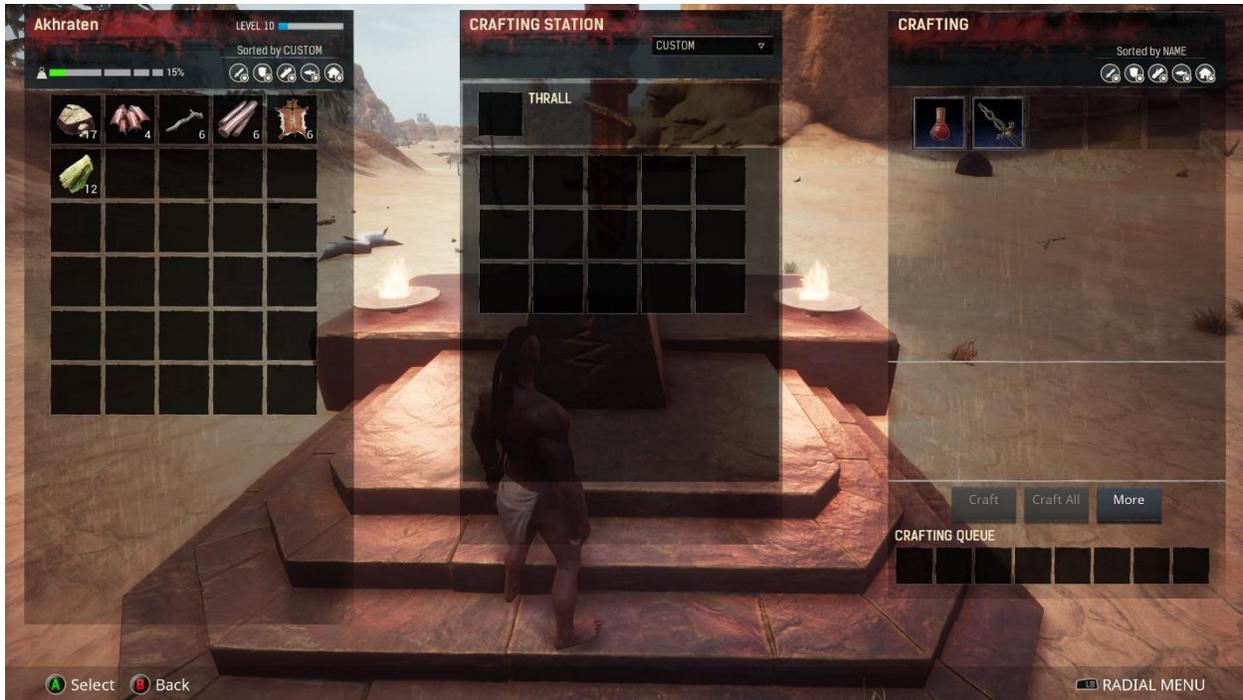
To break enemy NPCs you need three things: Fiber bindings, a truncheon and a Wheel of Pain. These can all be unlocked with the Thrall Taker feat at level 10. The truncheon will knock someone out after a few hits, leaving them ready to be tied up using the fiber bindings. Once they're knocked out and tied up you can drag them back to your Wheel of Pain and use it to convert them into thralls. The Wheel of Pain uses food as fuel and certain foods are more effective at breaking NPCs than others.

## 3.10  Religion

Conan's world is balanced on the edge between barbarism and civilization, but it's also a world where the gods themselves sometimes interfere in the lives of mortals. During character creation you can choose a god to worship, with six available at launch: Crom, Set, Yog, Mitra, Ymir and Derketo. Gods give special crafting items and bonuses to those who worship them. Crom is different than the others. In-fiction, Crom does nothing for those who worship him, and calling upon him will only lead to misfortune. In the game he's essentially the agnostic option, for players who don't want to engage with the religion system. Crom requires nothing, he gives nothing and does nothing.

Worship happens through an altar dedicated to your god. These will be unlocked when choosing your god during character creation. Special resources harvested from NPCs and other players can be used to craft items at the altar, or sacrificed to gain favor from your chosen god. Favor can be used to upgrade an altar to the next tier, which in turn unlocks new crafting opportunities.

Avatars are the ultimate expression of your religious fervor in the game. These are physical manifestations of your god that can be summoned to smite your enemies. To summon an avatar you'll need a tier 3 altar and an arch priest thrall. The summoning spell is an item that you then can craft at your altar and take with you into the Exiled Lands. Crafting this spell will destroy both your religious thrall and your altar. Once the crafting process is done you have 48 hours to use the spell before it decays and is destroyed.

While avatars are powerful they are not completely invincible. A special defensive dome can be erected around a tier 3 altar that will instantly destroy any avatar that touches it. Doing damage to an avatar will eventually remove it from the physical realm. In addition to protecting you from avatars the shield dome will also protect you from enemy projectiles, but keep in mind that it's not permanent. It will disappear after 36 hours.



## 3.11 Lore

With a fiction as rich and interesting as Robert E. Howard's Conan universe we can't shy away from incorporating storytelling into the game. This won't be just an empty sandbox. Scattered around the world you will find items that provide information about the events that have shaped the world around you. We recommend you take the time to really explore the world and read item descriptions in order to find as much information about the universe as possible.

NPCs found throughout the game will offer up information about the Exiled Lands and help you gain some insight into life as an exile. You will also discover clues about the ancient civilization that once inhabited this place as you play and explore. Their magic still resides in many of their now abandoned homes. What appears to be instructions for their subjects can be found half buried in the sand dunes. Explore far and wide to see ghosts of the ancient past and glean information from their ways.

## 3.12  Get in touch

For more information, visit us at www.conanexiles.com. You can also get in touch with us on Twitter, Facebook and Reddit.

# 4   Setting Up a Server

## 4.1   Dedicated server system requirements

|                    | Small                | Medium               | Large                |
| ------------------ | -------------------- | -------------------- | -------------------- |
| **Number of Players** | 10-player         | 30-player            | 40-player            |
| **Operating System** | Win 7/8.1/10 64 bit | Win 7/8.1/10 64 bit | Win 7/8.1/10 64 bit |
| **CPU**            | Intel Core2Duo 6850  | Intel Core i5 2400   | Intel Core i7 6700   |
| **CPU(GHz)**       | 3.0 GHz              | 3.1/3.4 GHz (Turbo)  | 3.4/4.0 GHz (Turbo)  |
| **System RAM**     | 8GB                  | 8GB                  | 12GB                 |
| **Diskspace**      | 35GB                 | 35GB                 | 35GB                 |

## 4.2 How to setup a server

1. Get SteamCMD
   https://steamcdn-a.akamaihd.net/client/installer/steamcmd.zip

2. Extract the contents of the steamcmd.zip to a folder of your choosing.

3. Open a command prompt and navigate to the folder you chose.

4. Create a different folder to install the server into. (for example *C:\Exiles*)

5. To get the server, run this command:
   ```
   steamcmd +login anonymous +force_install_dir C:\Exiles +app_update 443030 +quit
   ```
   *(On the first run, and ocasionally, SteamCMD will patch itself before running)*

6. Running the server:
   Please make sure you do not have a steam client running. If you do, you will see some error message boxes regarding steam DLLs (which you can ignore).
   From *C:\Exiles*, run: *ConanSandboxServer.exe*

   By default it will listen on *UDP ports 27015 and 7777*. You might need to add an exception in your firewall to get the server to show up in the Steam server browser.

You can then use the following command line parameters, for example:
```
ConanSandboxServer.exe –log –MaxPlayers=16
```

There is also a bat file that can be used to start the server where parameters can be added in *C:\Exiles*.

```
StartServer.bat
```

Some useful server parameters:

| Command | Description |
|---|---|
| `–log` | |
| `MaxPlayers=` | *1-40 players* |
| `MULTIHOME=` | *aaa.bbb.ccc.ddd (select network interface by ip)* |
| `QueryPort=` | *27015 (steam queryport)* |

Settings set in *ConanSandbox\Saved\Config\WindowsServer\Engine.ini*
some settings need to be specified in the *Engine.ini* file listed above, such as:

```
[/Script/OnlineSubsystemUtils.IpNetDriver]
NetServerMaxTickRate=30
```

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```
[OnlineSubsystemSteam]
ServerName=YOUR_SERVER_NAME_HERE
ServerPassword=YOUR_DESIRED_PASSWORD_HERE
```

Settings set in *ConanSandbox\Saved\Config\WindowsServer\Game.ini*

Others can be set in the *Game.ini* file, as such

```
[/Script/Engine.GameSession]
MaxPlayers=70
```

**Note:**

*Currently if you try to start the dedicated server build from the steam client, you will get some error messages about steam DLLs. This is not the recommended way to start your server, but it should still work if you skip past the error messages.*

# 5 Server Settings

## 5.1 Exposed Server Settings

These settings are available from the server settings menu accessed from the main menu in the game. Some options are only available before launching a new game and some when you are in a game.

### 5.1.1 Difficulty Presets

| Setting | Description |
|---------|-------------|
| Difficulty | *Change the difficulty of the game* |

### 5.1.2 General

| Setting | Description |
|---------|-------------|
| Message Of The Day | *Set message of the day here.* |
| Map | *Location of map to use* |
| Server Password | *The server password can be changed here.* |
| Admin Password | *This password gives administration rights.* |
| Make Admin | *Click 'Make Me Admin' and type in Admin password to get admin access on a server.* |
| Battleye Enabled | *This enables Battleye cheat protection on the server. Funcom highly recommends this to avoid cheaters from affecting your gameplay.* |
| PvP Enabled | *When this is flagged, Player vs Player is enabled on the server.* |
| Time-Restrict PvP | *When this is flagged, Player vs Player is only possible within the set time periods.* |
| Can Damage Player Owned Structures | *When this is flagged, players can attack and destroy other player's structures.* |

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| Time/Restrict PvP Building Damage | *When this is flagged, players can only attack and destroy other player's structures within the set time periods.* |
|---|---|
| Community | *Selecting a community from the drop down list will affect how your server is filtered in the server list. Please set up your community responsibly, in order to help players find a server that matches their playstyle.* |
| Server Region | *Selecting a server region will affect how your server is filtered in the list. Please select your region to help players find a server that is close to them.* |
| No Ownership | *Flagging this means that the ownership rules on the server do not exist. This means that all players can loot all chests, use all machines, dismantle all buildings etc.* |
| Containers Ignore Ownership | *Flagging this means that all containers are open to other players, but enables optional locking of some chests.* |
| Enable Sandstorm | *Flagging this allows sandstorms to periodically sweep across the Exiled Lands.* |
| Clan Max Size | *This sets the maximum allowable size of clans on the server. Once a clan reaches the limit, no new members can join.* |
| Tethering Distance | *In CO-OP game on a non-dedicated server, clients are tethered to the host player and the maximum distance can be set here.* |
| Maximum Nudity | *This setting determines the maximum amount of nudity on the server. This overrides the client preference, so if a server is set to no nudity, even if a player sets their client to full nudity, they will not be able to see nudity on this server. However, if a server allows full nudity, and a player sets their client to partial nudity, the client will correctly show only partial nudity.* |
| Server Voice Chat | *Select if the server should have an in-game voice chat or not* |

### 5.1.3   Progression

| Setting | Description |
|---|---|
| Player XP Rate Multiplier | *Raising this multiplies all types of XP that players receive. Speeding up player progression in all activities.* |
| Player XP Time Multiplier | *Raising this multiplies the rate players receive XP passively over time for surviving.* |
| Player XP Kill Multiplier | *Raising this multiplies the amount of XP that players receive from killing monsters and players.* |
| Player XP Harvest Multiplier | *Raising this multiplies the amount of XP that players receive from harvesting.* |
| Player XP Craft Multiplier | *Raising this multiplies the amount of XP that players receive for crafting.* |

### 5.1.4  Day/Night Cycle

| Setting | Description |
| --- | --- |
| Day Cycle Speed | *Raising this lengthens the entire 24hr day cycle. Individual parts of the day can be tweaked in the settings below. Note, this multiplier is applied in addition to any settings changes below.* |
| Day Time Speed | *Raising this lengthens the daytime period. Daytime hours in Conan Exiles are between 7:00 and 16:59 in-game time.* |
| Night Time Speed | *Raising this lengthens the nighttime period. Nighttime hours in Conan Exiles are between 19:00 and 4:59 in-game time.* |
| Dawn/Dusk Time Speed | *Raising this lengthens both dawn and dusk periods. Dawn in Conan Exiles is between 5:00 and 6:59. Dusk is between 17:00 and 18:59.* |
| Use Catch Up Time | *Enables or disables the use of Catch up time mechanics on the server* |
| Catch Up Time | *In order to create a smooth starting experience for new players, Conan Exiles has the ability to force a client PC to start at a certain time of day, regardless of the server time. If this setting is applied, new characters will start at the specified time, and then play at that time of day until the server "catches up" to them. We recommend not setting this to the darkest hours of the night, unless you are a sadistic person.* |

### 5.1.5  Survival

| Setting | Description |
| --- | --- |
| Stamina Cost Multiplier | *Raising this increase the amount of stamina players use per action. Lowering it decreases the amount.* |
| Player Active Thirst Multiplier | *Raising this increases the speed at which a player gets thirsty. Lowering it decreases the speed.* |
| Player Active Hunger Multiplier | *Raising this increases the speed at which a player gets hungry. Lowering it decreases the speed.* |
| Player Idle Thirst Multiplier | *Raising this increases the speed at which a player gets thirsty. Lowering it decreases the speed.* |
| Player Idle Hunger Multiplier | *Raising this increases the speed at which a player gets hungry. Lowering it decreases the speed.* |
| Logged Out Characters Remain In World | *If flagged, player bodies remain in the world in an unconscious state. If unflagged, player bodies disappear from the world when offline.* |
| Drop Equipment On Death | *If flagged, players who are killed drop their equipment when they die. If not flagged, players who die will respawn with all their equipment.* |
| Everybody Can Loot Corpse | *If flagged, anybody can loot the corpse of a dead player. If not flagged, only the player can recover items from their corpse.* |

| | |
|---|---|
| Thrall Corruption Removal Multiplier | *Raising this increases the speed at which thrall entertainers remove player corruption. Lowering it decreases the speed.* |
| Player Corruption Gain Multiplier | *It multiplies corruption given to players* |

### 5.1.6  Combat

| Setting | Description |
|---|---|
| Player Damage multiplier | *Raising this increase the amount of damage a player deals. Lowering it decreases the amount.* |
| Player Damager Taken Multiplier | *Raising this increase the amount of damage a player receives. Lowering it decreases the amount.* |
| NPC Damage Multiplier | *Raising this increase the amount of damage that NPCs and Monsters deal. Lowering it decreases the amount.* |
| NPC Damage Taken Multiplier | *Raising this increase the amount of damage that NPCs and Monsters receive. Lowering it decreases the amount.* |
| NPC Respawn Multiplier | *Raising this increases the respawn time for NPCs after they die. Lowering it decreases the respawn time.* |
| Friendly Fire Damage Multiplier | *Raising this increases the amount of damage a player deals to a friendly player. Lowering it decreases the amount.* |
| Building Damage Multiplier | *Raising this increases the amount of damage a building receives. Lowering it decreases the amount.* |
| Durability Multiplier | *Modifies the amount of durability damage that an item takes when used or damaged. Increasing or decreasing this directly affects how long weapons, tools and armor will last.* |
| Thrall Wakeup Time | *This determines the length of time that a Thrall will remain unconscious.* |
| Disable Avatars | *If flagged, Avatars cannot be summoned on this server.* |
| Time-Restrict Avatar Summoning | *When this is flagged, avatars can only be summoned within the set time periods.* |
| Enable Auto Facing on attack | *Activates the autotargeting system when using gamepad* |
| Enable Target Lock | *Activates the target lock system making it possible to lock on to enemies and neutrals.* |

### 5.1.7  Harvesting

| Setting | Description |
|---|---|
| Item Spoil Rate Scale | *Raising this shortens the time food lasts before spoiling. Lowering it makes food last longer.* |
| Harvest Amount Multiplier | *Raising this increases the amount of resources gathered when harvesting. Lowering it decreases the amount.* |
| Resource Respawn Speed Multiplier | *Raising this increases the respawn time for resources after being harvested. Lowering it decreases respawn time.* |
| Land Claim Radius Multiplier | *Raising this increases the radius at which land claim is applied. Lowering it decreases the radius. This also affects the respawn of resources and NPCs as well as the ability for other players to claim nearby land.* |

### 5.1.8 Crafting

| Setting | Description |
|---|---|
| Crafting Time Multiplier | Raising this increases the duration it takes to craft items. Lowering it decreases crafting time. |
| Thrall Crafting Time Multiplier | Raising this increases the time it takes to train a thrall. Lowering it decreases training time. |
| Fuel Burn Time Multiplier | Raising this increases the time fuel units burn. Lowering it decreases fuel burn time. |

### 5.1.9 Abandonment

| Setting | Description |
|---|---|
| Disable Building Abandonment | If flagged, disables decay on buildings over time. |
| Building Decay Time Multiplier | Raising this increases the time it takes for building pieces and structures to decay. Lowering it decreases the decay time. |

### 5.1.10 Chat

| Setting | Description |
|---|---|
| Chat Local Radius | Sets at what radius local chat will broadcast around a player in centimeters. |
| Max Message Length | Sets the max number of characters in a chat message. |
| Chat Has Global | The in-game chat has a global channel all players can speak in. |

### 5.1.11 Purge

| Setting | Description |
|---|---|
| Enable Purge | Unchecking will completely disable purge events. |
| Purge Level | Raising this increases the purge difficulty level. Level zero will turn purge system off. |
| Purges per day | Raising this increases the number of times a purge will be triggered in a real day. The actual number of purges is also dependent on the various settings below. |
| Restrict Purge Time | If flagged, purge's will be restricted to set times. |
| Purge Time Restrictions | The Purge will only take place during the times specified. |
| Purge Preparation Time | Raising this increases the time in minutes between the purge warning and the start of the purge. |
| Purge Duration | Raising this increases the number of minutes the purge will last. |
| Minimum Number of Online Players | Raising this will make purges only occur when the set number of players are online. If set to zero, there needs to be at least one player online for a purge to start. |
| Allow Building | If flagged, building is allowed during purges. |
| Purge Meter Trigger Value | Raising this increases the amount of different selected actions clans or players can do until they are eligible to be purged. |
| Purge Meter Update Frequency | Raising this will make purge value increase faster and make it easier to reach the purge trigger value. A faster purge update |

| | frequency will make active players and clans accumulate points faster. |
|---|---|

## 5.2   Admin Commands

The admin command panel can be accessed in the game by pressing CTRL-SHIFT-C. This gives access to a great variety of functions that admins will use in the game, from spawning items to setting times of day, to cloaking etc.

There are several additional commands that can be run from the command line (insert or tilde to open) which we think admins may find useful for day to day activities.

| Command | Description |
|---|---|
| `SummonPlayer[Playername]` | *Summon a player to your location. Useful for situations where they are stuck etc.* |
| `Fly` | *Will allow you to fly around the world. Extremely immersion breaking…* |
| `God` | *Makes you invulnerable to all damage, but also prevents knockbacks and other secondary effects from being applied to your character.* |
| `ToggleDebugHUD` | *This shows server performance and number of players in the top right and your location co-ordinates in the bottom left. (Note – not as cool as ToggleDebugHug command!)* |

*Ctrl-Alt-Shift-L – Will open a small window that shows your location in a format that can be copy pasted easily. Use this for bugfixing and teleporting to help stranded players.*

## 5.3   Unexposed Server Settings

There are many server settings that are not exposed in the server setting ui. To view a full list, open the console (insert or tilde) and type `GetAllServerSettings`.

*CAUTION – These settings remain hidden for a reason. These can have an extremely negative impact on your gameplay experience. Use with caution (but have fun, because this is a sandbox, after all!)*

| Command |
|---|
| `AvatarSummonTime` |
| `bCanBeDamaged` |
| `BlueprintConfigVersion` |
| `BuildingRadialDestructionForceMultiplier` |
| `ClipVelocityOnNavmeshBoundary` |
| `ConciousnessDamageMultiplier` |
| `ConfigVersion` |
| `PlayerSprintSpeedScale` |

| |
|---|
| PlayerStaminaCostMultiplier |
| PlayerStaminaCostSprintMultiplier |
| PVPBlitzServer |
| RotateToTargetSendsAngularVelocity |
| TargetPredictionAllowSecondsForAttack |
| TargetPredictionMaxSeconds |
| UnarmedNPCStepBackDistance |
| UnconsciousTimeSeconds |
| UseClientCatchUpTime |
| UseLocalQuadraticAngularVelocityPrediction |
| ValidatePhysNavWalkWithRaycast |
| WeaponEffectBoundsShorteningFraction |
| CrossDesertOnce |
| DogsOfTheDesertSpawnWithDogs |
| EnforceRotationRateInCombat_2 |
| EnforceRotationRateWhenRoaming_2 |
| LocalNavMeshVisualizationFrequency |
| LQAVPFadeTime |
| LQAVPMethod |
| LQAVPUseTime |
| MaxAggroRange |
| NetworkSimulatedSmoothRotationTimeWithLQAVP |
| NPCKnockbackMultiplier |
| NPCMindReadingMode |
| NPCRespawnMultiplier |
| PathFollowingAvoidanceMode |
| PathFollowingSendsAngularVelocity |
| PlayerIdleHungerMultiplier |
| PlayerIdleThirstMultiplier |
| PlayerKnockbackMultiplier |
| PlayerMovementSpeedScale |
| PlayerOfflineHungerMultiplier |
| PlayerOfflineThirstMultiplier |

# 6   Mods for Conan Exiles

Some things to be aware of:

You have to restart it when you want to work on a new mod. (This might not get fixed any time soon, since flushing/reloading assets seems problematic.)

Renaming mods is not trivial, so choose good unique names.

The feedback for users when joining a server that has mods is very bare bones right now. It currently requires people to look for the mods manually, but this will be improved.

## 6.1 Mods – Short Version

A mod in Conan Exiles is a single .pak (archive) file containing modified versions of game assets, and optionally new assets.

To create mods, get the devkit from the Epic Games Launcher, do your changes and build the mod to generate a mod file. You can either distribute the mod through the Steam Workshop by uploading it from the DevKit, or simply share the file with your friends directly.
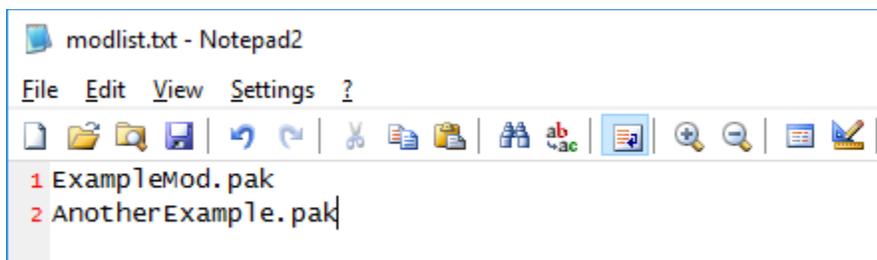
## 6.2 Installing Mods

The easiest way to install mods is to subscribe to them on the Steam Workshop. Once they are downloaded you can find them in the "Mods" menu from the Main Menu in game. You can also use mods that you get outside of the Steam Workshop - put the mod .pak file in *"<SteamLibrary>\steamapps\common\Conan Exiles\ConanSandbox\Mods"* and it will be available in the in-game mods menu.

## 6.3 Installing mods on a dedicated server

Client side: To join a server with mods, you must first have the same mods the server is running, with the same load order. When joining a server, you will get a message box telling you which mods you are missing. You cannot connect to the server unless you have those mods installed and activated.

Server side: To start a server with mods you put the mod files (*<mod name>.pak*) in "*<dedicated server folder>/ConanSandbox/Mods/*" and add a text file with the file names of those .pak files, one per line like this:



Instead of creating modlist.txt manually you can also select the mods you want in your game client, then copy the file from "*<game folder>/ConanSandbox/Mods/modlist.txt*" to "*<dedicated server folder>/ConanSandbox/Mods/modlist.txt*". When clients try to connect to the server, the game will first check to make sure the clients have the same mods as the server selected. If they don't they won't be able to connect.

# 7 Conan Exiles DevKit

NOTE: You should install the DevKit with the shortest path possible. The build process will fail if the paths are too long. So to prevent this error, you should install under *C:/ConanExilesDevKit*, rather than *C:/Program Files (x86)/MyStuff/Games/ConanExiles/ConanExilesDevKit*.

Download and run the DevKit from the Epic Games Launcher (https://www.unrealengine.com/download), under the "Modding" tab. The DevKit is a modified version of the Unreal Engine editor and will let you do (almost) everything the developers can do except C++ code changes.

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## 7.1   Discord

Community members have set up a discord for exiles modding: https://discord.gg/66jB9dN. Please read #rules when you join!

## 7.2   YouTube

- Modding tutorials by HellsSauna

## 7.3   Usage

The first time you launch the DevKit it will open with a default mod selected. You can use this to play around and see how things work, but before you start working on something you want to use or distribute to other people you should create a new mod with a unique name. See the section "Conan DevKit menu" --> "Create new mod" below for more details.

**Note:** *The folders in "<devkit folder>/Games/ConanSandbox/Mods/" are used by the DevKit to edit the mod, so deleting a folder here means you can no longer edit that mod. These are the folders you want to have backups of!*

Editing existing game assets: Modify assets normally. Note that you can't rename, move or delete existing game assets.

To create new assets: New assets can only be added in "*Content/Mods/<mod name>*".

Use "Play in current viewport" to test with the mod content loaded.

## 7.4   Build errors

When building a mod, Unreal will cook each asset. This process will fail if the assets contains certain errors (like a Blueprint compiler error). If the build fails, check the output log for the lines saying something like this (should be near the bottom):

```
LogModManager: LogInit: Display: Failure - 7 error(s), 10 warning(s)

LogModManager: ModCook completed with code 1

LogModManager:Error: Error cooking. Cook process returned: 1
```

In this example there are 7 errors that caused the build to fail. The log will say what the errors were in more detail further up. Fix these, and try to build again!

## 7.5   Sharing Mods

When you have a mod you want to share with others, you must first Build the mod. Then you can either upload the mod to the Steam Workshop or share the generated .pak file directly with your friends.

## 7.6   Conan Exiles DevKit Menu

- Select active mod: Switch which mod you are currently editing. This will restart the editor!
- Create new mod: Use this to .. create a new mod.
  - o   The name you enter here will be used to create a folder (*<devkit folder>/Games/ConanSandbox/Content/Mods/<mod name>*).
  - o   Any assets you add will end up here, so make sure you choose a unique name to avoid conflicts with other mods. (Especially until we figure out a safe way to rename mods >.<)

- o You can change the display name of the mod to something more user friendly before building/uploading to Steam.

## 7.7 DevKit Window

- **Name:** Name of mod as it appears in the in-game mod menu and in the Steam Workshop.
  - o The name can't be empty and must be less than 128 characters long.
- **Author:** Name shown as author in the in-game mod menu.
- **Author URL:** Shown in the in-game mod menu.
- Version major, minor, build: Show in the in-game mod menu.
- **Description:** Shown in the in-game mod menu and on the Steam Workshop.
  - o Max length is 8000 characters.
- **Change notes:** Shown in Change Notes on the Steam Workshop page.
- **Preview image:** A .png image that must be less than 1MB. Used on the Steam Workshop page.
- **Build mod:** This will cook the mod and package it so it can be used/uploaded to Steam.
  - o The build can take a while (up to an hour).
- The generated .pak file is the only file needed to load the mod. You can share this both with and without Steam.
- **Open in explorer:**
  - o **Active mod folder:** Opens the local folder of the active mod that the DevKit uses when editing the mod.
  - o **Built mod folder:** Opens the folder where the .pak file generated from a build is located.
- **Cook by the book:** By default, the DevKit will find and cook each asset modified in the currently active mod individually. If "Cook by the book" is checked, it will do a full dependency based cook (but force include all new assets added by the mod) and then pack up cooked versions of the mod's assets. The normal cook will almost always be much faster.
- **Steam file ID:** The Steam Workshop item ID used to identify the mod in the Workshop.
  - o This is automatically managed when uploading to Steam.
  - o **Open workshop page:** Opens a browser window with the Workshop page of the current mod. It might take a few seconds before the page is updated after uploading.
- **Steam visibility:** Visibility of the mod in the Steam Workshop.
  - o **Public:** Visible to everyone.
  - o **Friends-only:** Visible to you, your friends and admins.
  - o **Hidden:** Visible to you, admins and users marked as creator.
- **Upload to Steam button:** Uploads the current mod to Steam. You must first have a build of the mod.
- **Update mod info to Steam button:** This will only update the info on the Steam page for your mod with the current state of all the textboxes and preview image. Allows you to update the preview image on Steam and Steam visibility without uploading the whole mod.
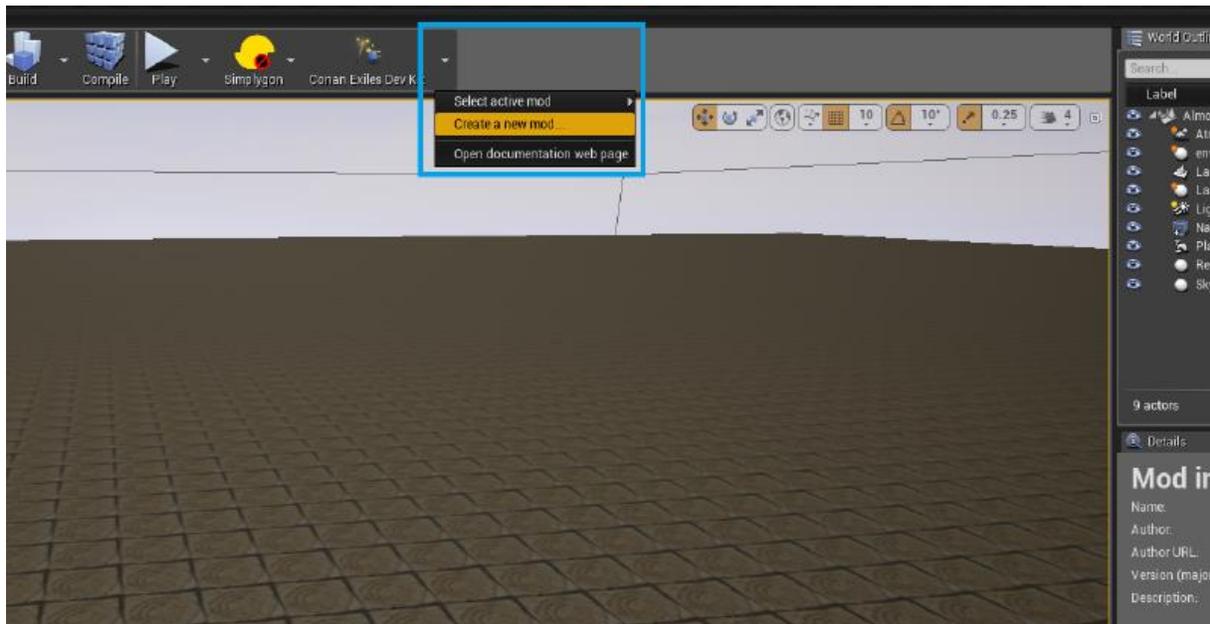
## 7.8 Steam

You can upload a mod to Steam through the DevKit so others can subscribe to the mod. Note that changes made to the mod on the Steam Workshop website will NOT be reflected in the DevKit. This means that changes to name, description, visibility or preview image will be overridden the next time
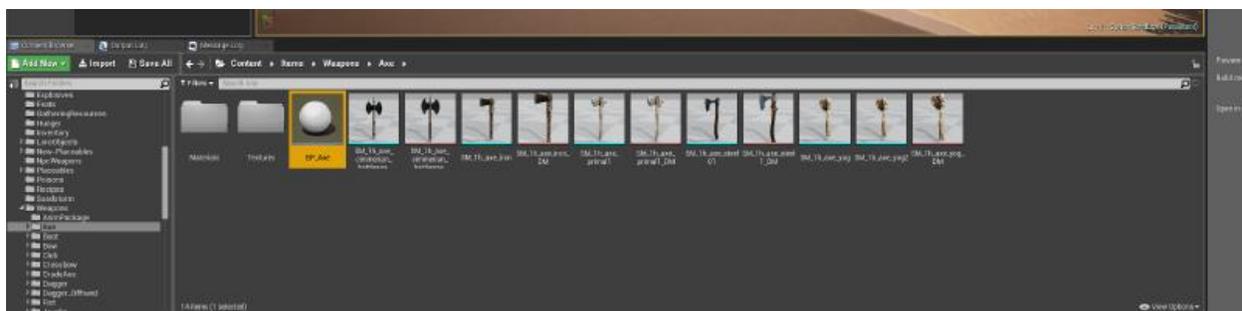
you upload your mod from the DevKit, so make sure you update these field only through the DevKit. Changes to the other fields will not be affected.

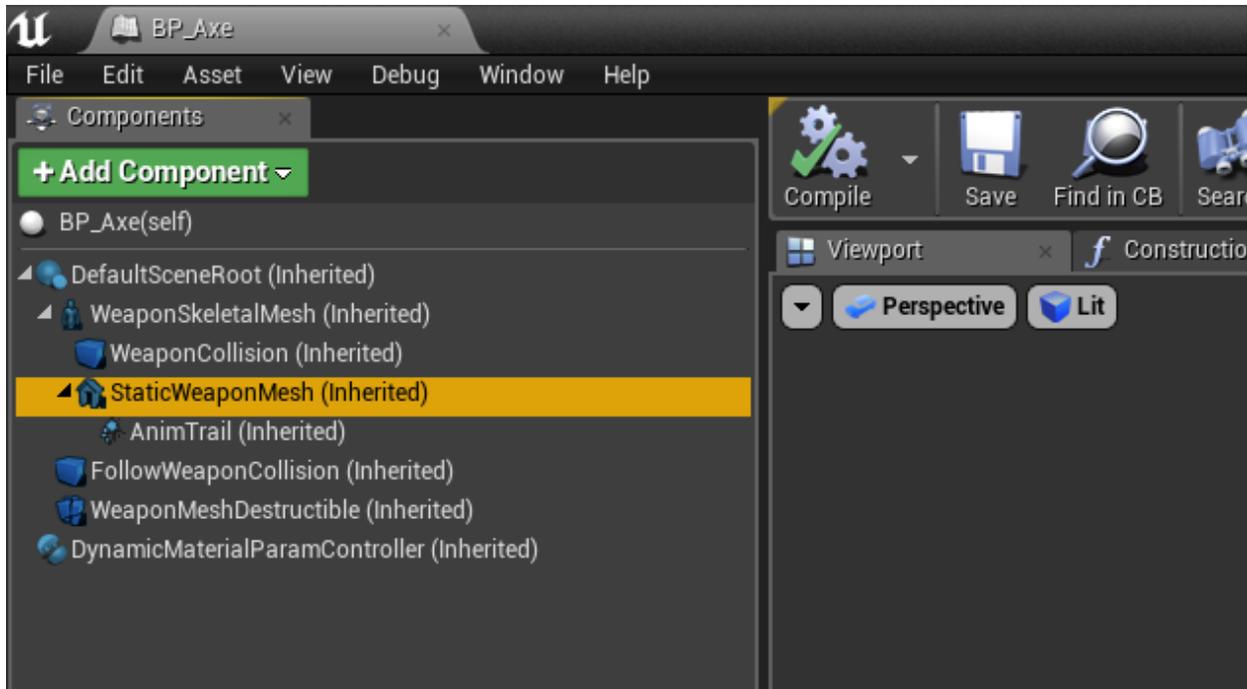## 7.9    Creating an Example Mod

- Open the DevKit and go to the DevKit drop down menu. Select "Create a new mod..." and you will be asked to enter a name for the mod.
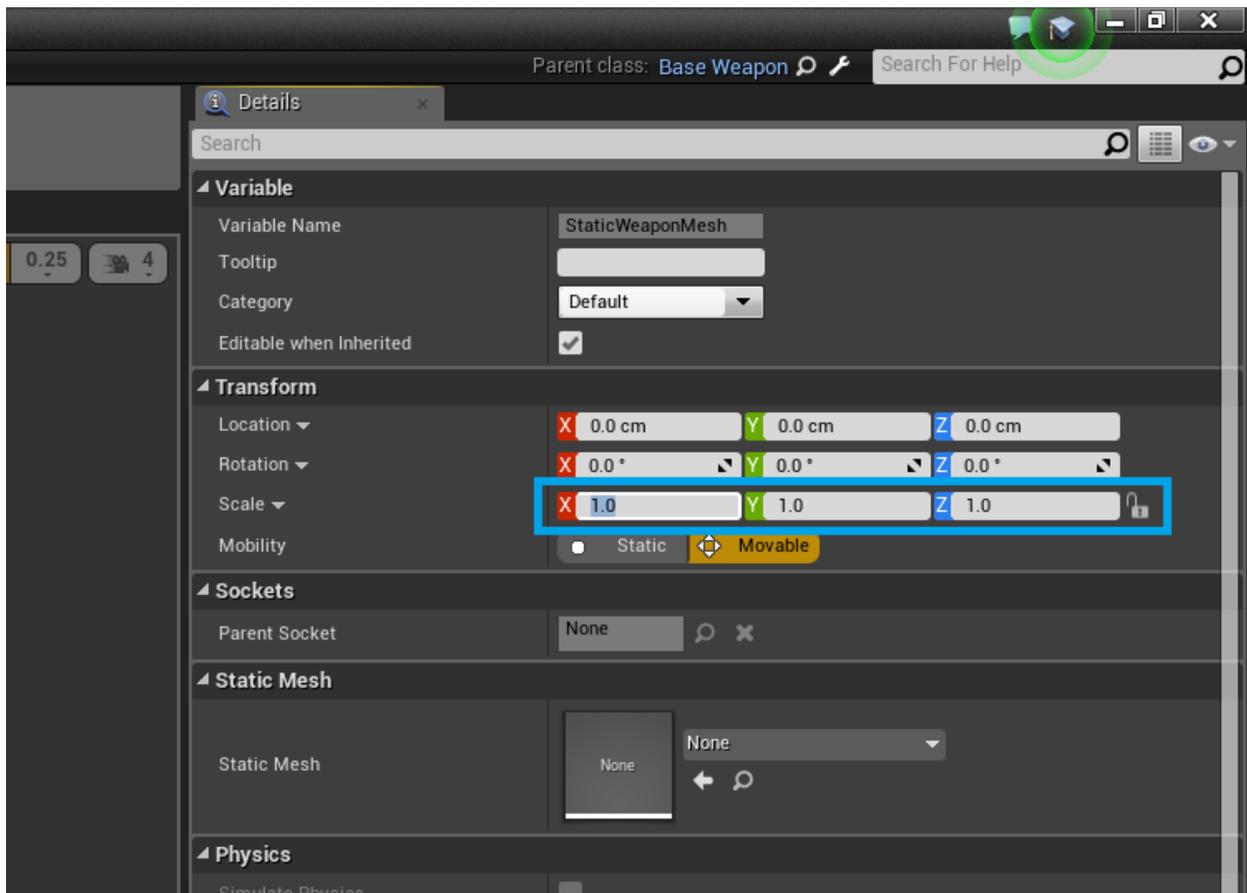


- Create new mod
- Enter a name and click "Create". Once the editor has restarted you can begin creating the mod.
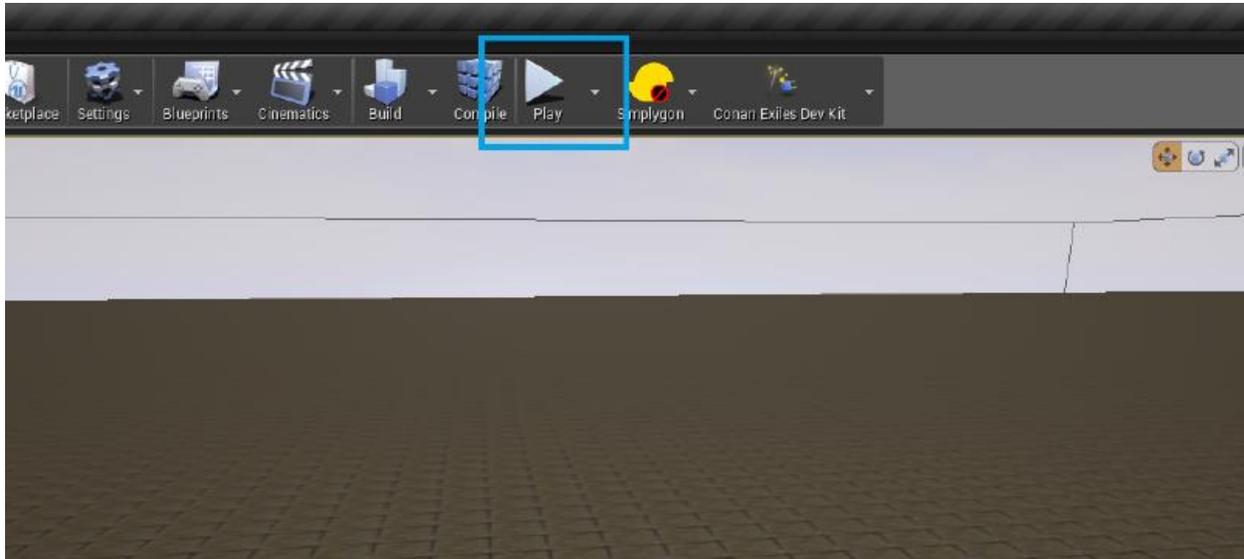- In the content folder go to *Items/Weapons/Axe* and open *BP_Axe*.



- Edit *Items/Weapons/BP_Axe*
- Select the '*StaticWeaponMesh*' in the Components window.

- Select StaticWeaponMesh
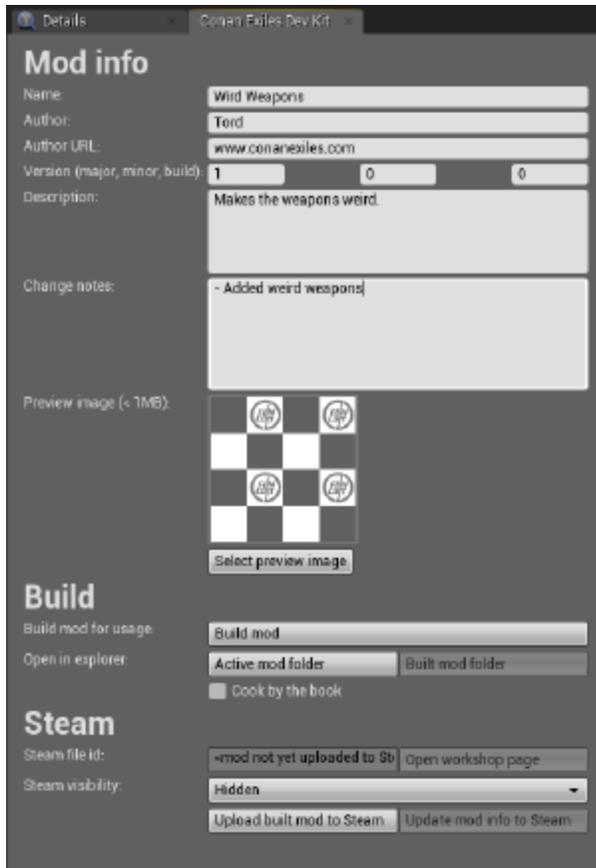- Change the values of the Scale property of the Transform in the Details window.

- Change the scale properties
- Hit 'Compile' and 'Save' for that Blueprint. Repeat for other items (like *'Items/Weapons/Torch'*, *'Items/Weapons/RepairHammer'*, *'Items/Weapons/Pickaxe'*).
- To test your mod you can use 'Play' from the main window.



- Use 'Play in selected viewport'
- Once you are done with your mod, go to the DevKit panel. See the "DevKit window" section for details on the different fields and buttons.



- Go to DevKit panel
- Enter the details and select a preview image.

1. Click the "Build mod" button to build the mod. This process can take a while depending on how many assets are changed in the mod.
2. Once the build is done, you can either click "Upload mod to Steam" or go to the 'Built mod folder' and share the '*YourModName.pak*' file directly.

## 7.10 Under the hood

The devkit is built from Funcom's modified version of Unreal Engine 4.12.5.  The main changes specific to the devkit are

- It (transparently to the editor) redirects reads/writes of assets/maps to the mod's folder on disk:
  - Reads/writes in *<content>/Mods/<active mod name>/\** are remapped to *<content>/Mods/<active mod name>/Local/\**
  - Reads/writes anywhere else in *<content>/Mods/\** are blocked.
  - Reads/writes anywhere else under /Content are redirected to *<content>/Mods/<active mod name>/Content*, with reads falling back to the original path if nothing is found in the mod.
- It tries to prevent adding/moving/deleting/renaming anything outside */Content/Mods/<active mod name>/*
- It prevents opening or exporting assets Funcom bought from the marketplace (for licensing reasons).
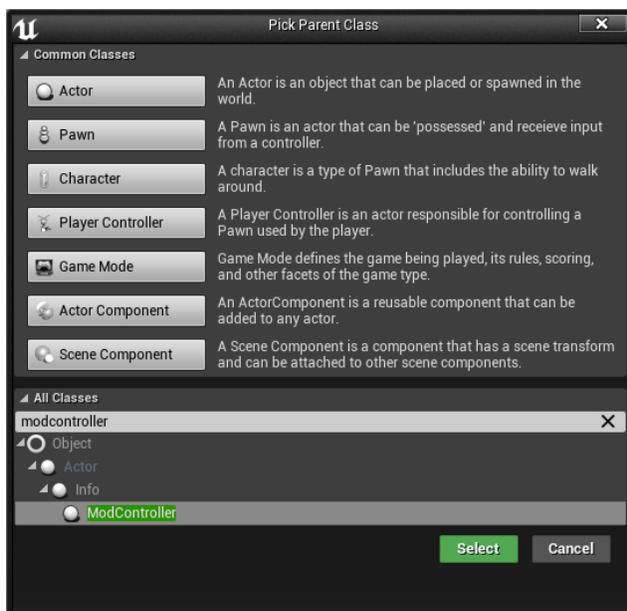- It adds the devkit toolbar button and menu.

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# 8  Modding DataTables and Components

The old way of modding a DataTable would be to edit the DataTable directly and applying the changes directly to the asset. Modifying an existing asset is the recipe for having incompatible mods. Unless you are specifically replacing something that already exists, you should always strive to not modify existing assets directly.

For DataTables the new method involves using a set of tools you unlock through a new class called a ModController.

## 8.1  Step One - The ModController

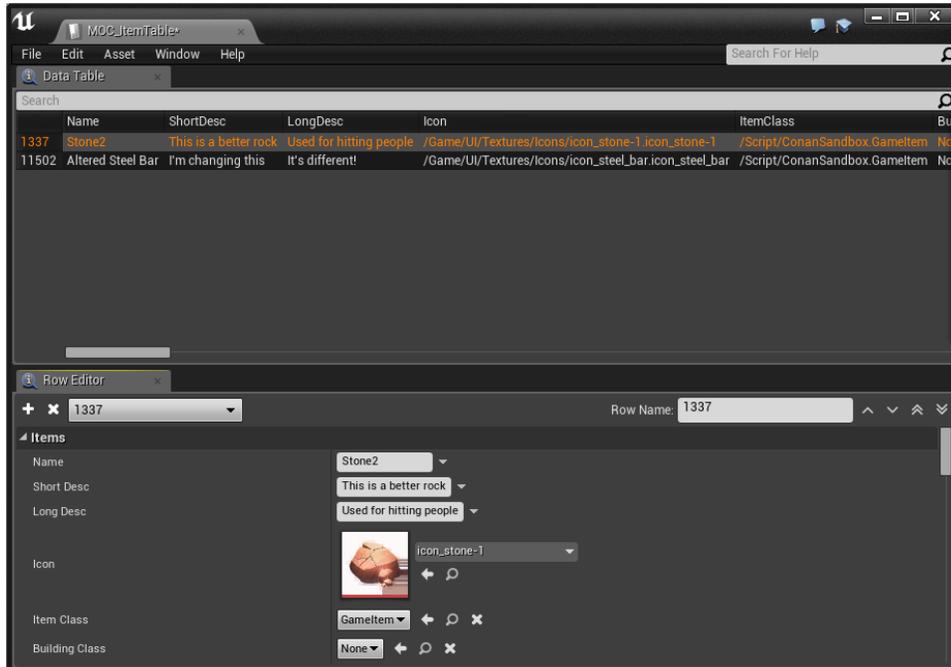Create a new blueprint in your mods folder that inherits from the ModController class.



### 8.1.1  ModController Info

- This blueprint will be found by the game as long as it exists in your mod folder, and the server will automatically create an instance of it and spawn it during startup.
- It will always be available from anywhere, so it's a great place to put global data for your mod.
- It will also be saved to the DataBase. If you create new variables on it, and tag them with the "SaveGame" flag, it will be saved and loaded when the server restarts. So persistent data can also be stored here for your mod.
- All ModControllers will be Spawned/Loaded in the mod load order! That primarily means their BeginPlay will be ran in that order as well, but it is also relevant in Step Two.
- ModControllers get Spawned/lLoaded before any other saved actor in the DataBase.
- It is always relevant to all players, and can replicate properties to them. Any variable marked as Replicated will be updated on all clients. Client-side modifications you have made can get global information from your mod from here.

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## 8.2 Step Two - Make your DataTable

In this example we are creating a new table that uses the ItemTable struct. You do that by right clicking in your mod folder -> Miscellaneous -> DataTable. And selecting "ItemTableRow". If you are targeting different DataTables, select the appropriate struct for your target DataTable.

We are creating a completely new item with a new ID. Stone2, ID 1337. Other than the name and description it's the same as normal Stone.



And we are altering an existing item, by overriding the row in the DataTable. This is Steel Bar, ID 11502. Which we are changing the name of, and the descriptions. Other than we copied the values completely from the normal Steel Bar entry in the ItemTable.

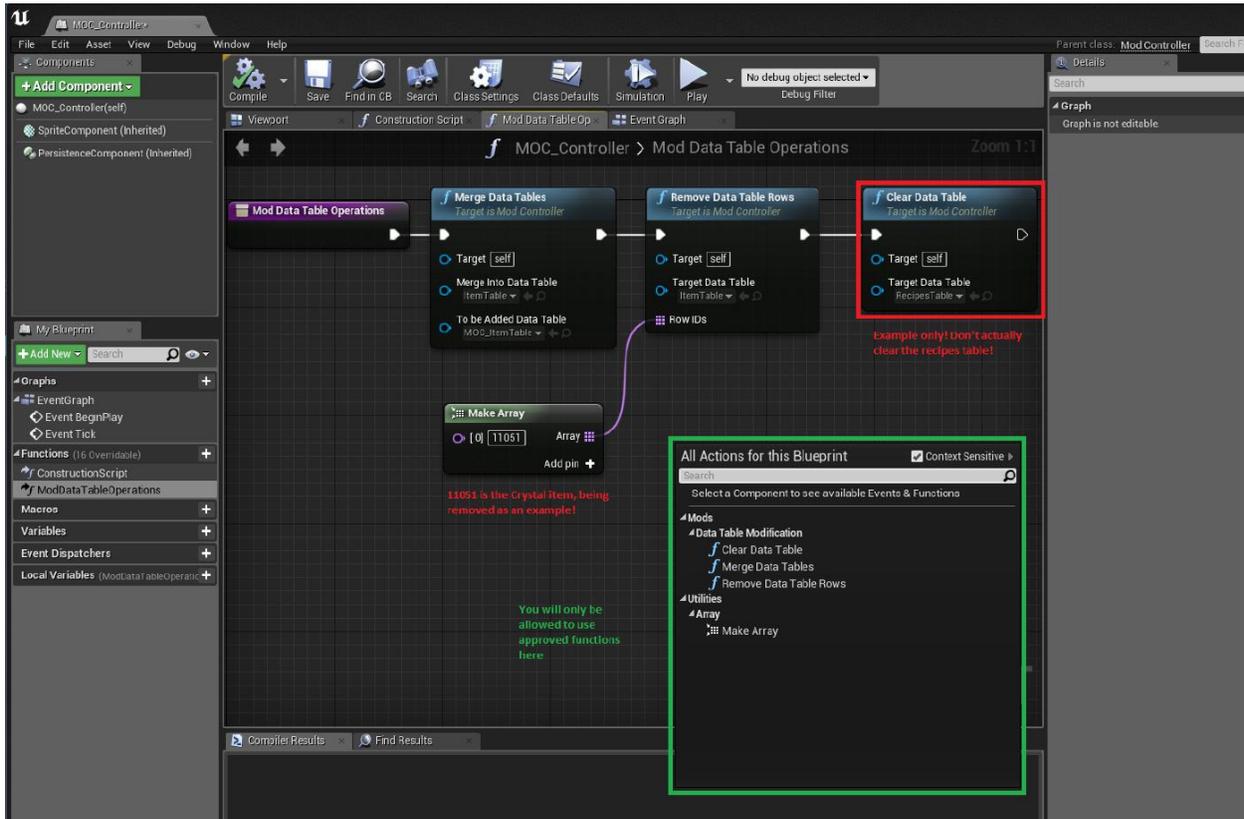The goal here is to Merge my own mod specific ItemTable (MOC_ItemTable) into the games ItemTable.

NOTICE: The row ID needs to be unique for new items between mods, otherwise they will override each other! We are considering some ideas so you don't have to worry about this anymore, but for now you need to be careful to pick unique IDs for your new entries.

## 8.3 Step Three – ModDataTableOperations

Every blueprint that is created that inherits from ModController will automatically get a function added called "ModDataTableOperations", which is very similar in concept to the ConstructionScript.

It will automatically be executed on game startup. And only allows certain functions to be executed inside of it. This is because it needs to run very early to make sure all the DataTables are altered before

they get accessed by any game logic. And to do that, it runs these functions on the Default Object for the class. So doing anything other than the approved actions here does not make sense.



Here I use the "Merge Data Tables" function to merge my "MOC_ItemTable" into the "ItemTable".

I also show you how to use the "Remove Data Table Rows" function to simply delete rows, and the "Clear Data Table" to show how to completely remove all entries from a DataTable. You should obviously not completely clear out the RecipesTable, unless perhaps if you are making a complete total conversion mod.

### 8.3.1   ModDataTableOperations
Gets run as early as possible during game startup

Is run on the Default Object of the class. Not the ModController object you get during normal play as mentioned in Step One.

They are executed in Mod Load Order. Which means that if multiple mods modify the same DataTable row, the last one in the mod load order will be the winner. But it will still be compatible with those mods, but one will lose some of its changes to the other mod overriding it.

You are only allowed to use specifically approved functions here. Since it runs on the default object, I don't want you to mess anything up. The new DataTable functions here are also not available outside of ModDataTableOperations.

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## 8.4  Conclusion DataTables

You now have a mod that modifies a DataTable without actually touching that DataTable's asset! This means that it will not always break whenever we touch that DataTable in an official patch. And it means that other mods that follow the same method can all dynamically merge and remove things to any DataTable as well! This should make life easier for modders, giving them less work to maintain their mods. And gives players who use mods more options to mix and match their favorite combinations of mods.



We plan to expand on this feature of modifying DataTables to allow individual columns to be edited, and not just entire rows.

## 8.5  Dynamically added Components

The second problem the patch tries to alleviate is when mods require new RPCs (Remote Procedure Calls). Most importantly for our game the RunOnServer call. (You can learn more about owning connections here
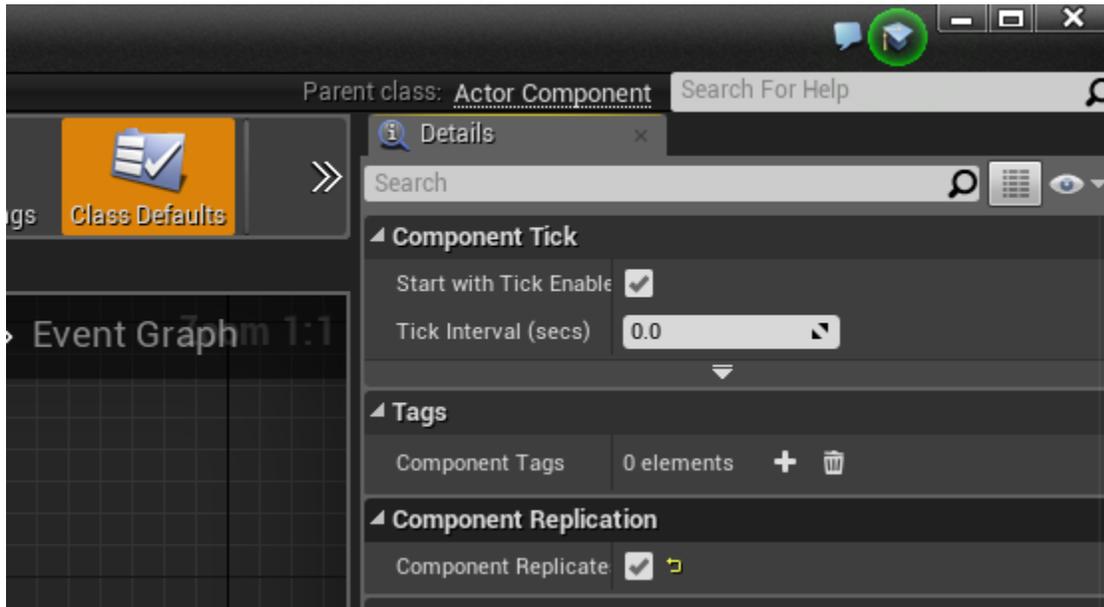https://docs.unrealengine.com/latest/INT/Gameplay/Networking/Actors/OwningConnections/

In our game the actors that will have an owning connection is the PlayerController and the controlled Pawn/Character actor. Our PlayerController class is the "Funcombat_PlayerController". Our controlled Pawn for players is the "BasePlayerChar". You can add RPCs that will work with owning connection to any of these Actors, in any of the blueprints they inherit from. Which for BasePlayerChar means that you can add RPCs in the parent blueprints as well (BaseSurvivalChar, BaseBPCombat, BaseBPChar). This is how many modders have been dealing with compatibility issues, introducing a new inheritance level between one of these layers, getting their own blueprint to add stuff in. But this method still requires edits to one of the mentioned blueprints, to change the parent of one of them. So, it will break if we update that asset, or if any other modder is touching the same one.

Another important layer to the owning connections is that it extends to owned objects such as Components. So, you can do RPCs through Replicated Components as well, which you can find many

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examples of us doing in our blueprints as well. This is what the new system takes advantage of. You can now create a new replicated component that you can attach to any Actor without having to touch that asset.

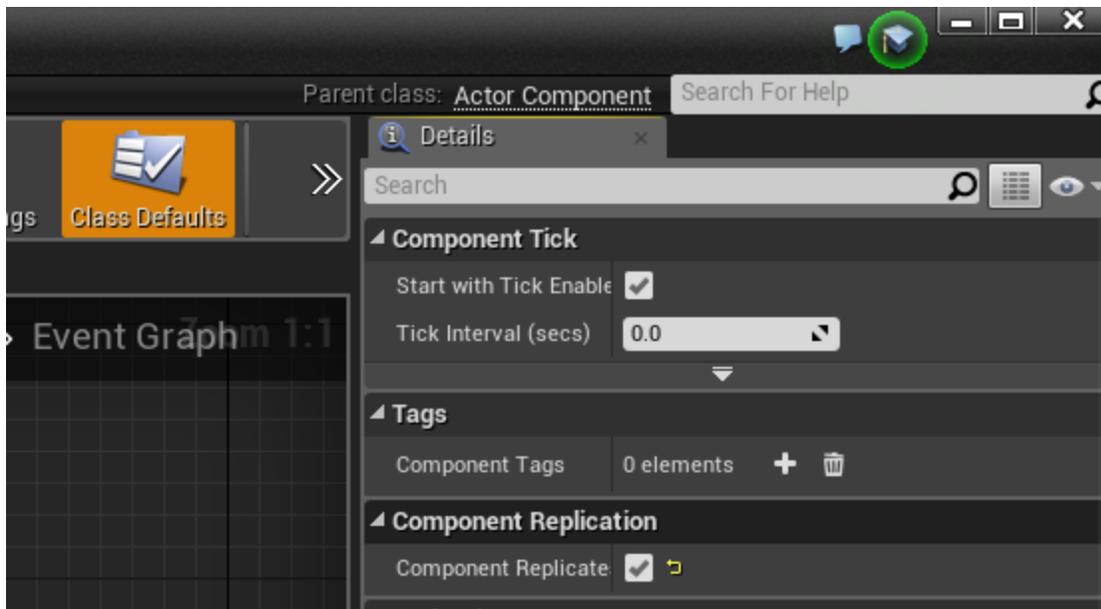## 8.6   Step One - Create your Replicated Component

Create a component that fits your need, does not matter which type it is. But if you want to use this for RPCs, you have to enable the "Component Replicates" option under Class Defaults.



## 8.7   Step Two - Add your component to your ModController's AdditionalClassComponents list

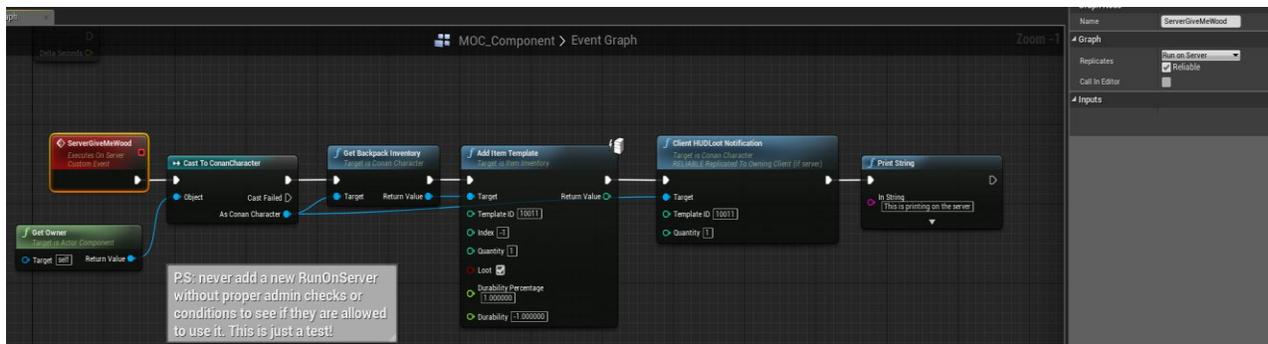With this setup, any BasePlayerChar that gets spawned will get a MOC_Component added to it.

You can add a ComponentTag to it if you wish, so you can do GetComponentsByTag to find it later, or in case you need multiple of the same type and need to distinguish them.
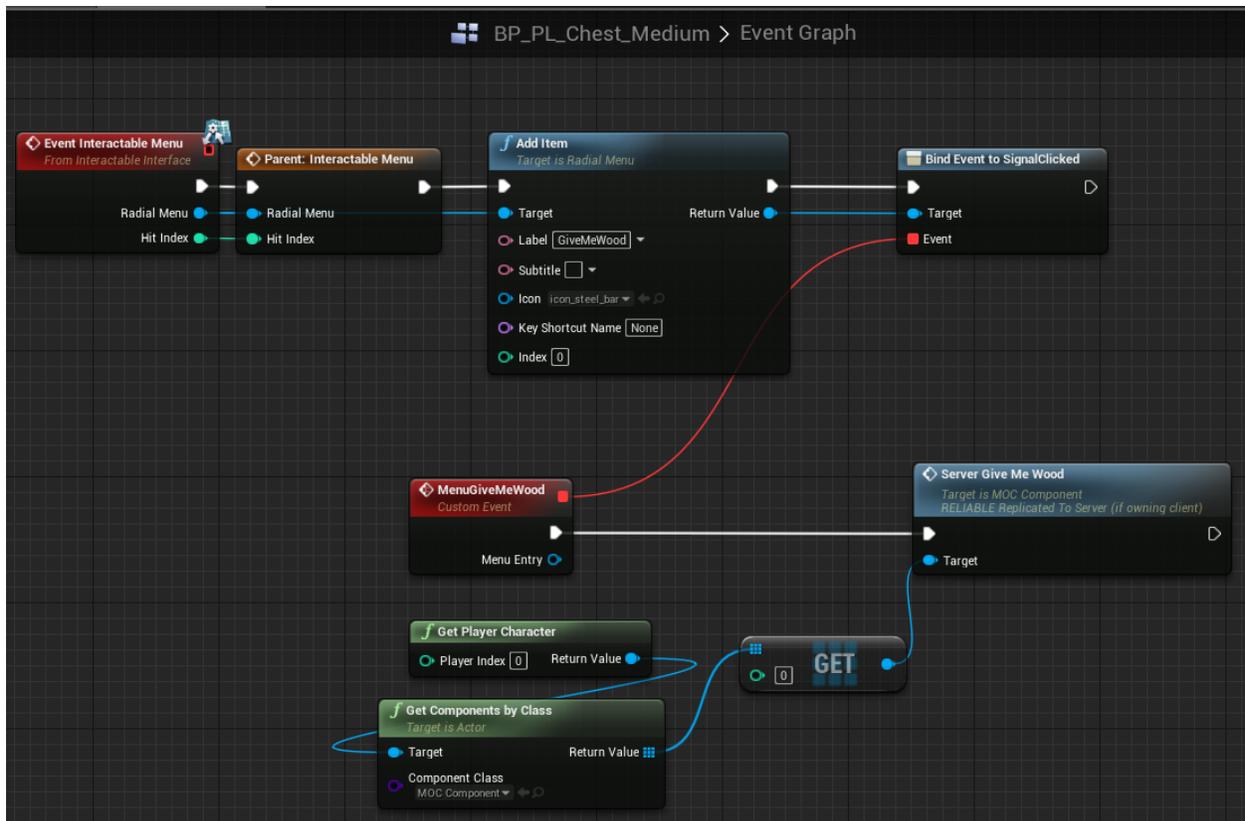
## 8.8 Step Three - Make all the new RPCs you need

As an example, I have added a new radial menu button to the "Wooden Box", that adds a Give Wood option. But as mentioned before, touching an existing file is asking for incompatibility issues. So this is just as an example, you should do this by making a completely new placeable.

Inside the MOC_Component:



Inside the BP_PL_Medium_Chest (Which is the Wooden Box):

## 8.9 Conclusion Components

The wooden box now has a new RPC call to the server that will give the player one wood item. And we did it without having to touch any of the player or the playercontroller blueprints!



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# 9  Technical manual Changelog

**Version 1.3**

- **Manual layout overhaul**
  - *Cleaned up font type/size use.*
  - *Commands, settings and other useful info has been emphasized with italics, font or tables.*
- **Technical manual content update**
  - Exposed server settings *updated according to changes to the In-game server settings.*
  - Exposed server settings *descriptions re-written to better describe how they work and what they do.*
  - Mods for Conan Exiles *updated according to changes to the Conan Exiles DevKit*

**Version 1.4**

- Updated Server content
- Added purge settings
- Added/removed a few updated server settings
- Added three new chapters