

# CHAPTER 4: NPCS

## CREATING AN NPC

In this section I'll be stepping you through the basics of creating a new NPC.

To create a new NPC, in the Object Window browse to Actors > Actor > Actor.

Right-click on one of the existing NPCs and select New.

Editor ID	Form ID	Count	Users	
AADeleteWhenDoneTestJeremyBig	0010D140	1	0	
AADeleteWhenDor	New	0		
AADeleteWhenDor		0		
Abelone		3		
AcolyteJenssen		16		
Adara		16		
Addvar		31		
Addvild		11		
Adeber		3		
Adelaisa		19		
Adisla		9		
AdonatoLeotelli		14		
AdrienneAvenicci		28		
AduriSarethi	00019BFF	1	12	
AelaTheHuntress	0001A696	1	166	
Aeri	0001360B	1	16	
Aerin	00013346	1	20	
Agna	000A9599	1	0	
Agni	000135E5	1	11	
Agnis	00020044	1	17	
Ahkari	0001B1D6	1	7	
Ahlam	00013BBE	1	25	
Ahtar	0001325F	1	28	
AiaArria	0001325C	1	35	

Figure 426 - Creating a new NPC.

The first thing we need to set is a unique ID for this actor base record. In the following example I set the ID to WTJornTester and set his name in the Name field to 'Jorn the Tester'. The text in the Name field is the NPC name you'll see in-game.

Let's take a look at some of the tickboxes on the left hand side first.

- Essential: Makes this NPC unkillable.
- Protected: Makes this NPC unkillable except by the player.
- Respawn: This NPC will be resurrected when the cell it's in resets.
- Unique: Allows the story manager to reference this NPC even if it has been unloaded. Since I only plan on having one instance of this NPC out in the world I'm going to tick it for this example.
- Summonable: Needs to be ticked when creating an NPC that you can summon with a spell.
- Is Ghost: Makes this NPC unhittable.
- Invulnerable: Makes this NPC unable to take damage, but can still be hit.
- Doesn't Bleed: Disables blood splatter when hit.
- Simple Actor: Disables facial animations and death and assault events.
- Doesn't affect stealth meter: Tick this for NPCs you plan on turning into a follower.

I'm going to make this character a nord, so I set the Race drop-down to NordRace.

For this example, I'm going to use the MaleNord voice type. If you plan to give this NPC unique voice acting and had previously set up a custom voice type, you would need to select that voice type here.

Ticking the Female tickbox would make this NPC use the female model instead. If the NPC is female, ticking Opposite Gender Anims would make the NPC play the male standing and walking animations instead, and vice versa.

**Important:** Changing an NPC's height may affect the accuracy of enemy spellcasters.

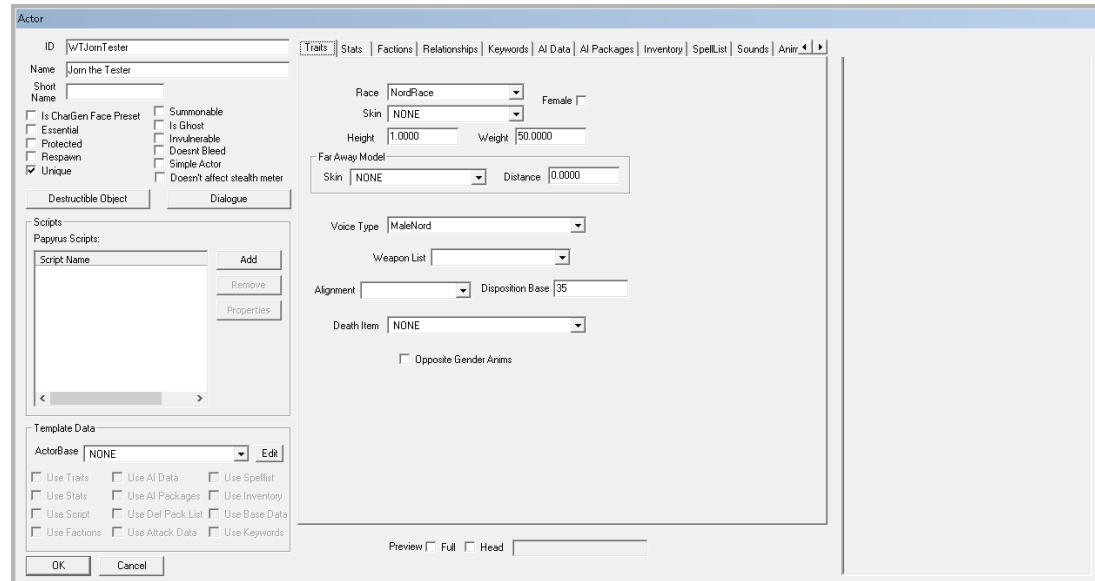


Figure 427 - Traits tab.

Go to the Stats tab.

By default the NPC's level will be set to 1. You can change this value or set the NPC's level to scale with the player's level by ticking the 'PC Level Mult' tickbox.

With PC Level Mult ticked, the Level field will become the Level Mult field; a multiplier used to calculate the NPC's level. Calc Min will set the NPC's minimum level and Calc Max will cap the NPC's maximum possible level.

For this example, I set Calc Min to 5 and Calc Max to 10, leaving the Level Mult set to 1.00.

Changing an NPC's level will affect their skills and their Health/Stamina/Magicka. You can give an NPC extra health, stamina or magicka by adding a value to the Health Offset, Magicka Offset or Stamina Offset fields.

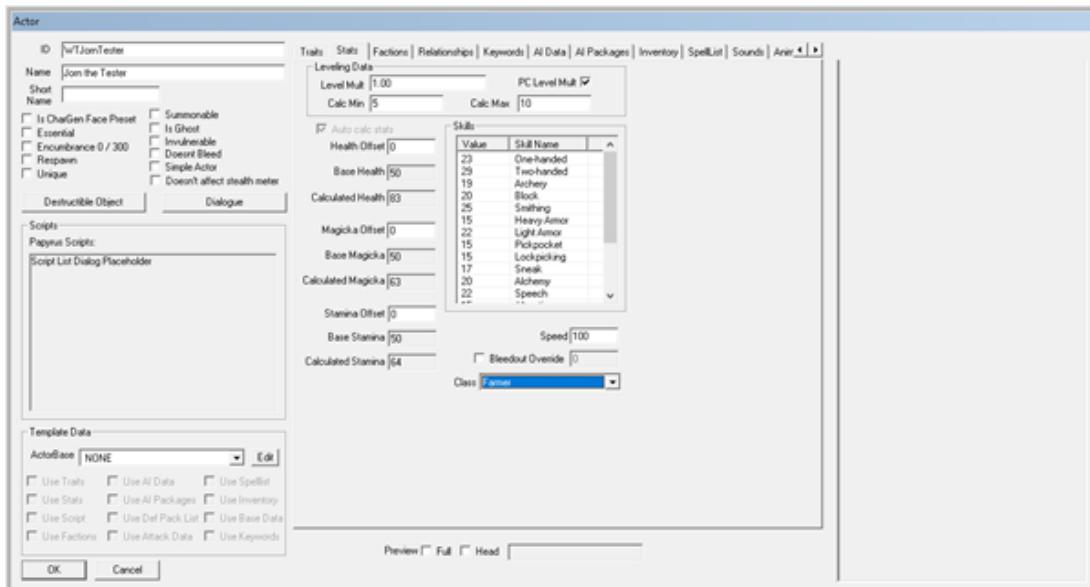


Figure 428 - Stats tab.

The Class drop-down affects the NPC's skill point distribution. For example, CombatSorceror will gain more points in magic skills per level than the CombatBarbarian class. I'm going to set Jorn's class to Farmer for this example.

Next let's look at the Faction tab.

This lists the factions that this NPC belongs to. Factions serve several purposes. They define which NPCs will aggro onto an aggressor if a member of a faction is attacked within a detectable range of another NPC of the same or allied faction.

They are also used to determine the dialogue available to an NPC. For example, merchants are members of the JobMerchantFaction faction, miners are members of the JobMinersFaction faction and followers are members of the PotentialFollower faction.

Factions are also used to link a merchant with their inventory.

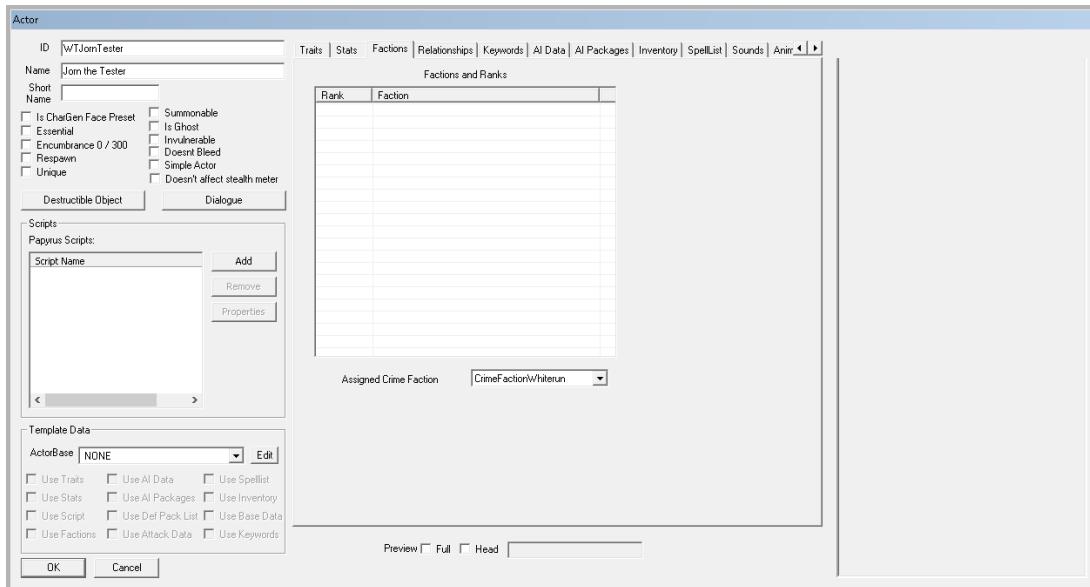


Figure 429 - Faction tab.

For this example, I'm going to add Jorn to the CrimeFractionWhiterun and TownRiverwoodFaction factions.

To add a new faction, right-click in the factions list and select New.

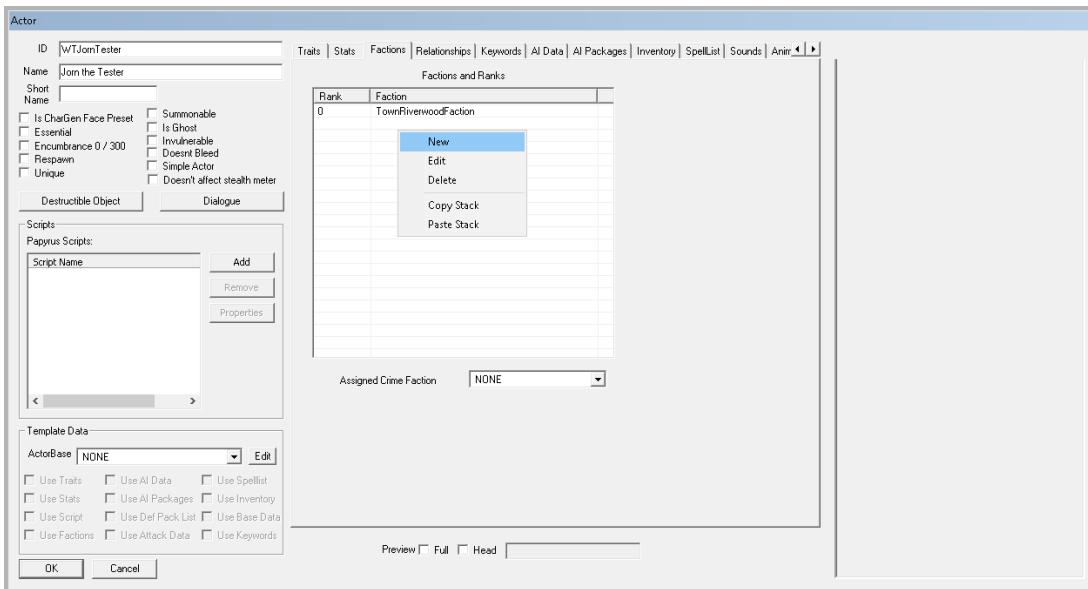


Figure 430 - Adding a faction to an NPC.

Filter by 'crimefactionwhiterun', click on CrimeFactonWhiterun in the form list and click OK.

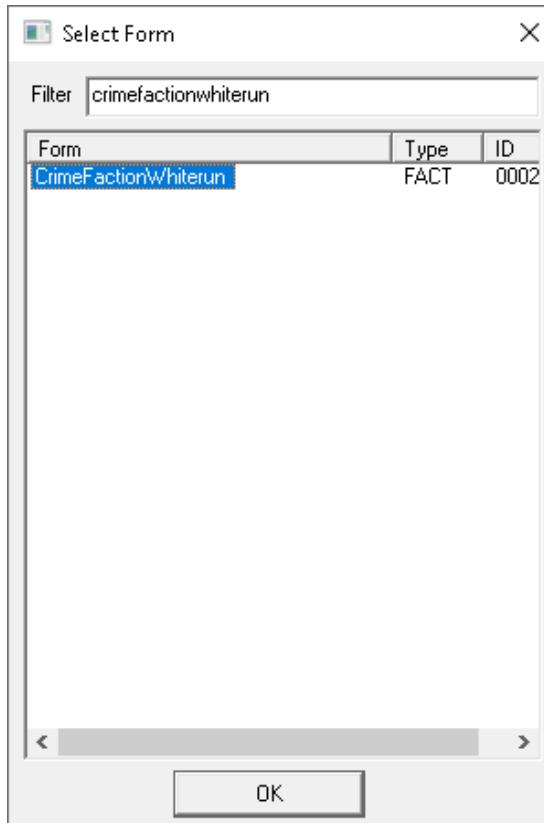


Figure 431 - Faction list.

Repeat these steps to add Jorn to the TownRiverwoodFaction as well.

Set the Assigned Crime Faction drop-down to CrimeFactionWhiterun. This will determine which hold will issue a bounty on the player if the player is caught committing a crime against this NPC.

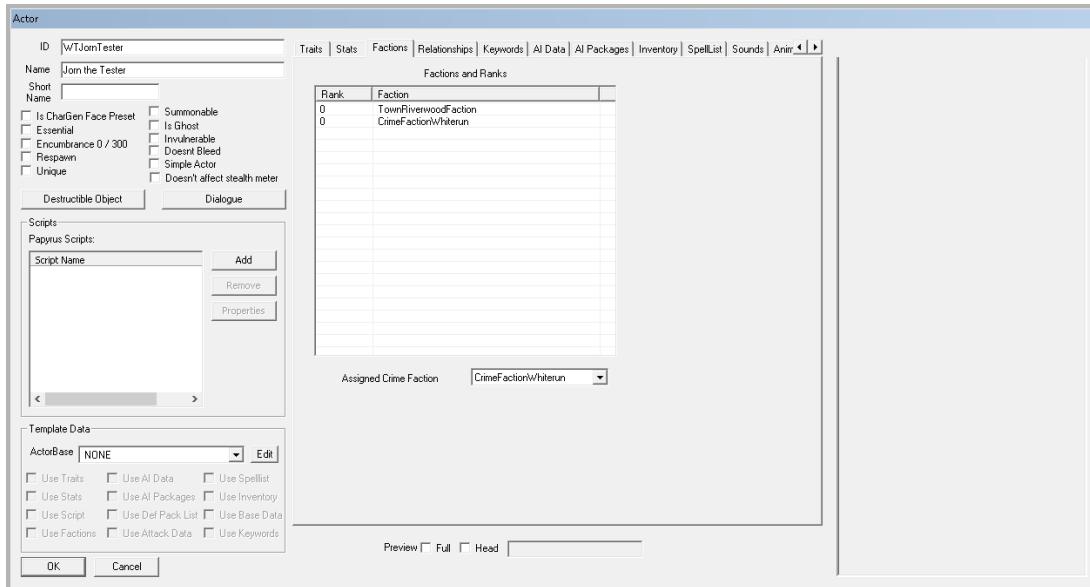


Figure 432 - Factions tab with crime faction set up.

Because Jorn is a member of the TownRiverwoodFaction, if he sees you attacking other members of this faction he may become hostile depending on how his AI will be set up in the AI Data tab later.

The Relationships tab allows you to set what kinds of relationships this NPC has to other NPCs. This affects the kind of dialogue available to the NPC. For example, an NPC may comment favourably about the player assaulting a nemesis, or may lament the passing of a loved one.

To add a new relationship, right-click in the relationships list and select New.

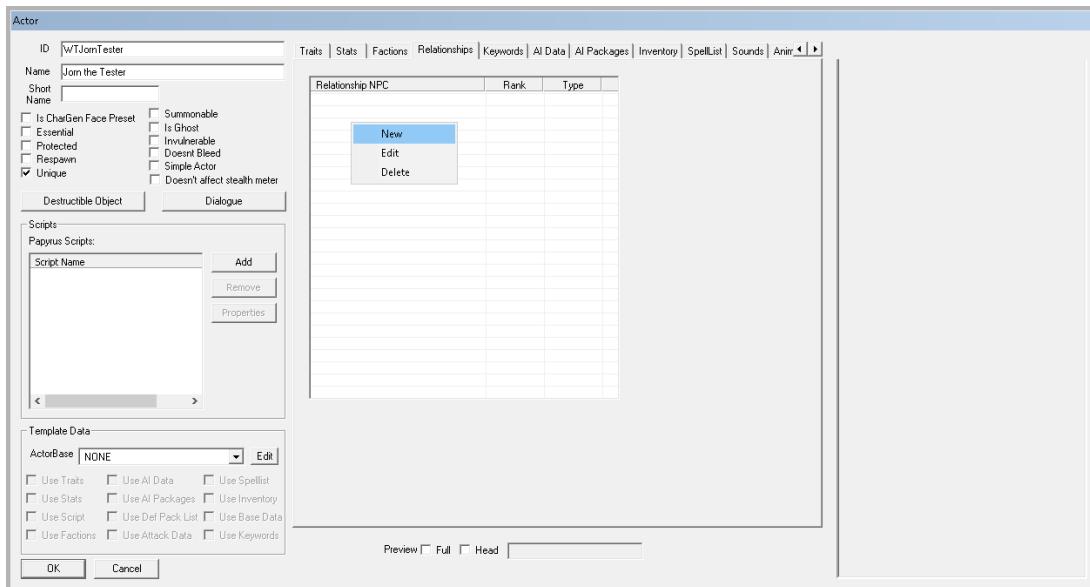


Figure 433 - Adding a new relationship.

Set the Relationship ID. This should just be the names of the two NPCs involved.

The Parent NPC drop-down should automatically be set as Jorn.

For this example, I'm going to set the Child NPC drop-down to Delphine and I'm going to set the Relationship Level to Foe.

Jorn is going to have an open disdain for Delphine and should anything happen to her, he'll likely be pleased about it.

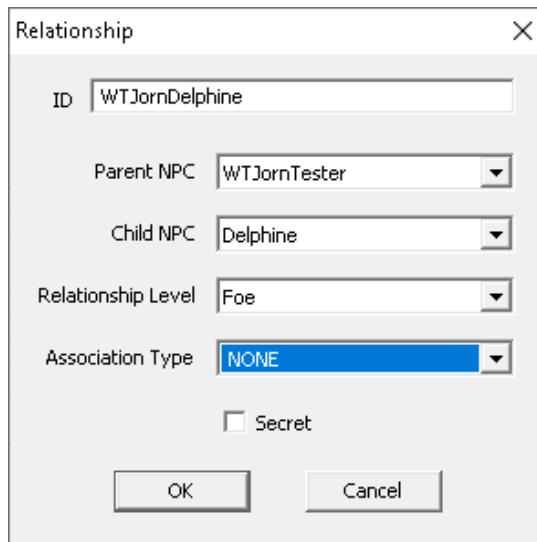


Figure 434 - Relationship properties.

Click OK to close out of Relationship properties.

Jorn's relationship with Delphine should now appear in the relationships list.

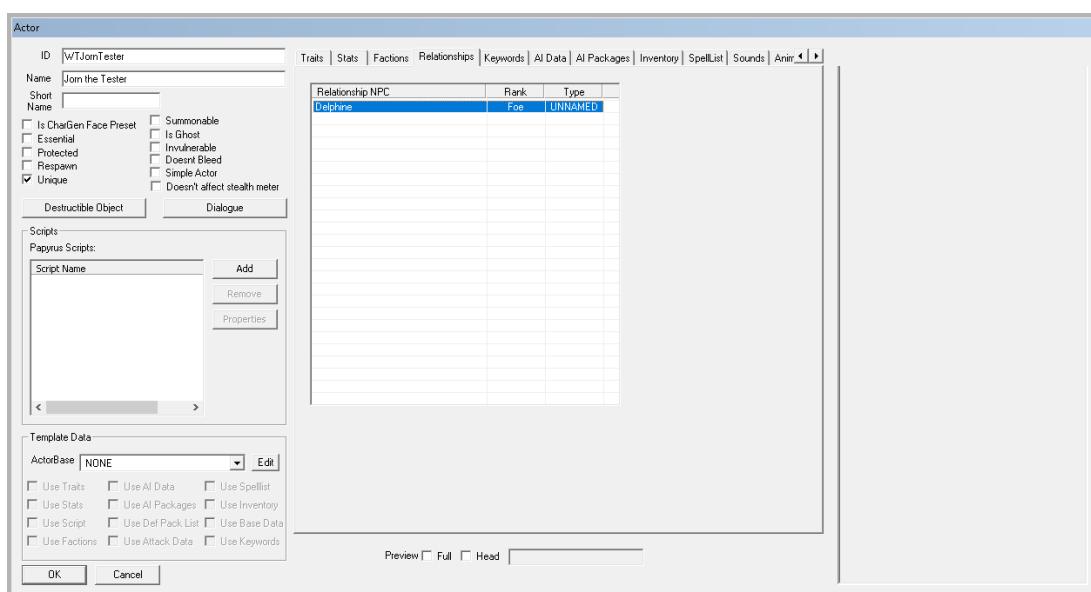


Figure 435 - Relationships tab with a relationship set up.

The Keywords tab is used to assign keywords to an NPC, which act as additional flags.

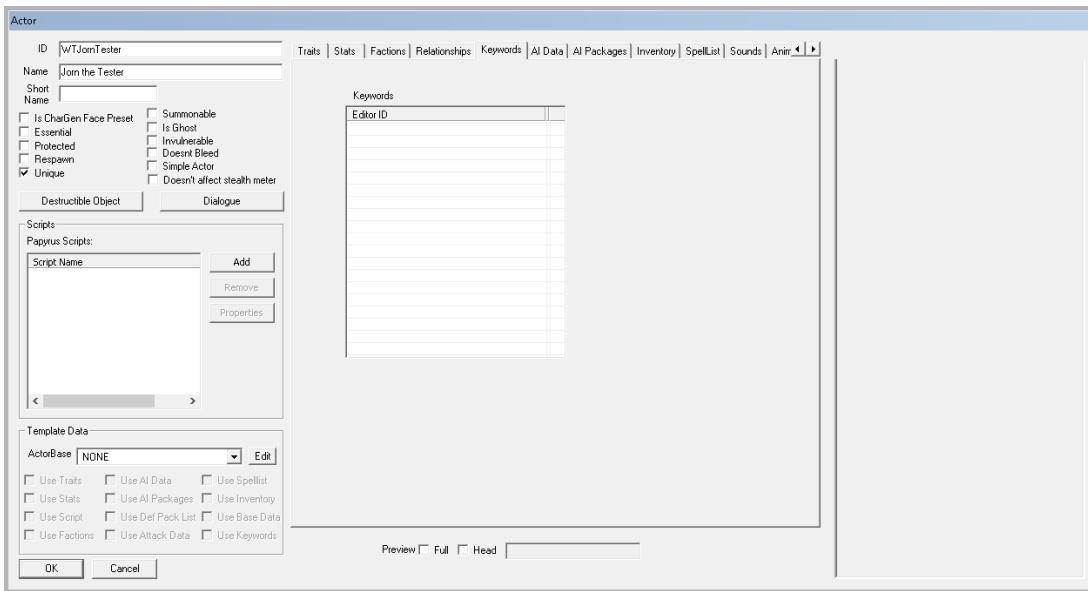


Figure 436 - Keywords tab.

For this example I'm not going to give Jorn any keywords. But if you wanted to add a keyword, right-click in the keywords list and select Add.

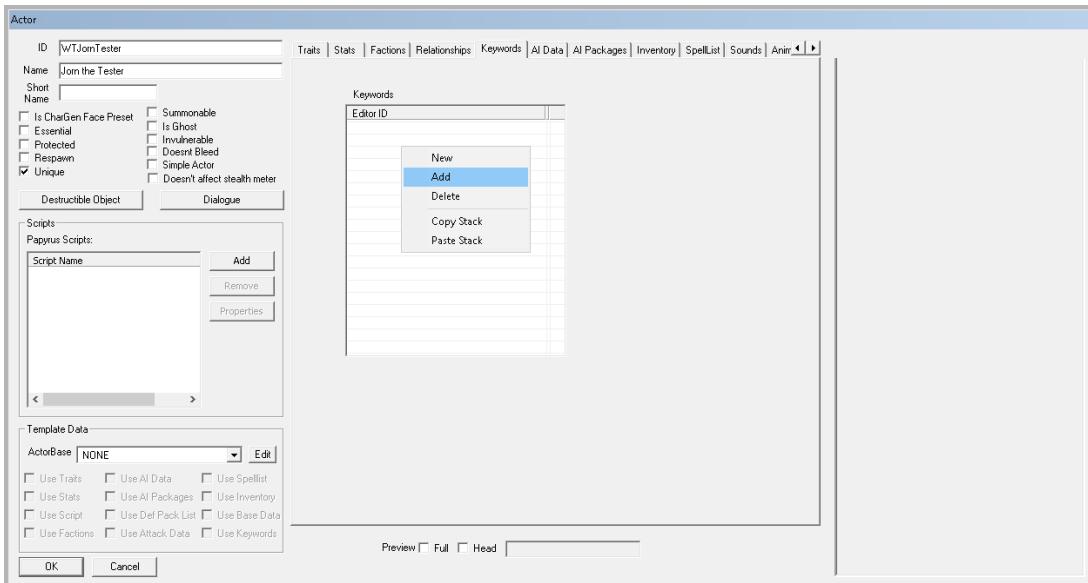


Figure 437 - Adding a new keyword.

Highlight the keyword you want to add then click OK.

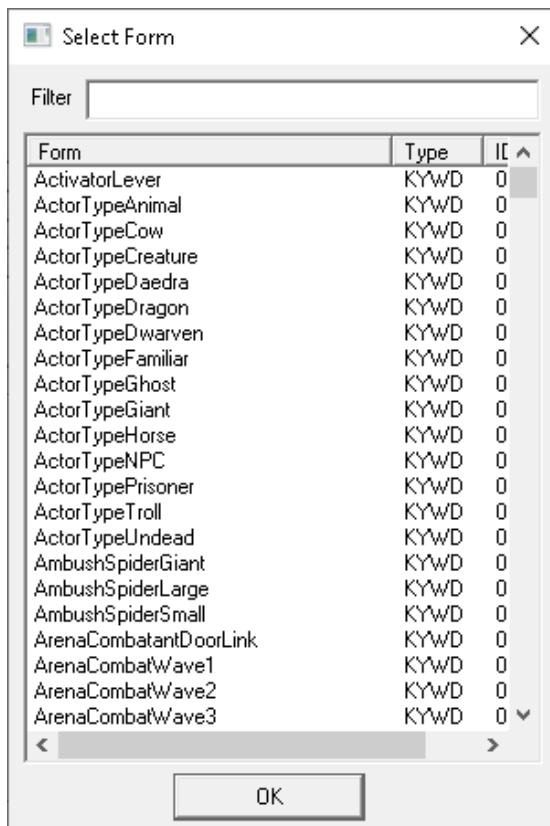


Figure 438 - Keywords list.

The AI Data tab allows you to set how this NPC will behave in combat.

The Aggression drop-down sets how this NPC reacts to the player or other NPCs that are in different factions.

Unaggressive NPCs will avoid engaging in combat unless it's to defend themselves. Aggressive NPCs will attack enemies as soon as they're detected. Very Aggressive NPCs will attack enemies as well as other neutral NPCs as soon as they're detected. Frenzied NPCs will attack anyone on sight, even members of their own faction.

The Confidence drop-down affects the likelihood that this NPC will flee during combat.

Cowardly NPCs will flee from combat as soon as they detect an aggressor. Cautious NPCs will flee if the aggressor is stronger than they are. Average NPCs will flee if they are outmatched in combat. Brave NPCs will flee from combat only if they are losing. Foolhardy NPCs will never flee from combat.

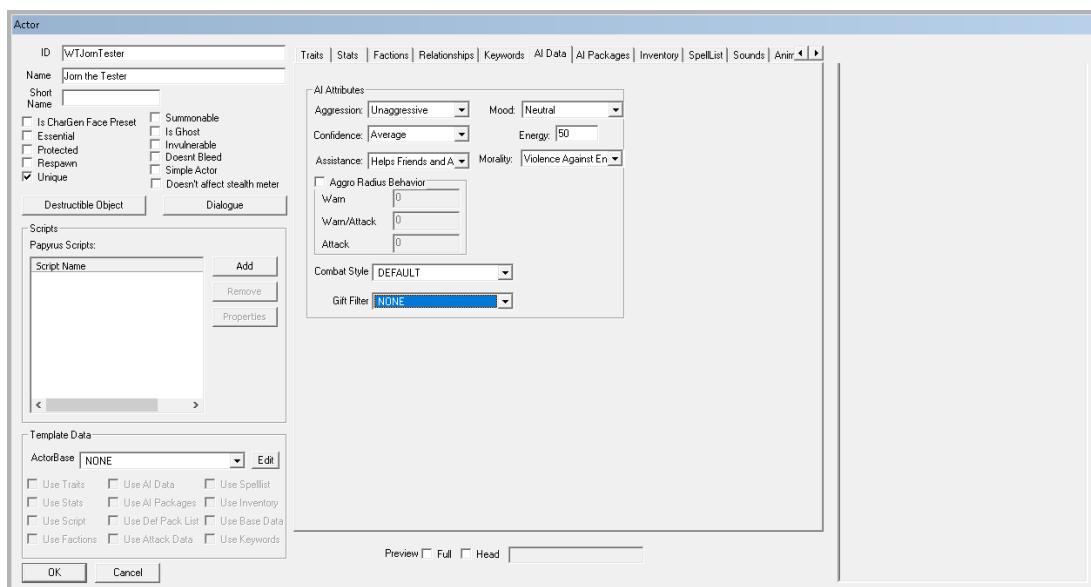


Figure 439 - AI Data tab.

The Assistance drop-down determines whether the NPC will engage in combat if they detect that a member of their faction or an allied faction is under attack.

Helps Nobody means this NPC won't join combat to help out an ally. Helps Allies means this NPC will join combat to help out members of their faction. Helps Friends and Allies means this NPC will join combat to help out members of their faction or members of allied factions.

The Morality drop-down determines which crimes this NPC will commit when directed to commit a crime by the player.

No Crime means this NPC will never commit a crime when directed to. Property Crime Only means this NPC will only steal. Violence Against Enemies means this NPC will assault other NPCs when directed to. Any Crime means this NPC will do anything that the player orders them to.

The Gift Filter and Mood drop-downs aren't used as far as I'm aware.

Combat Style is used to determine how often the NPC uses certain actions in combat, such as blocking or casting spells. You should choose a combat style that matches the NPC's primary weapon. For example, if the NPC is wielding a two-handed weapon, you should use something like csHumanBerserkerLvl1. For spellcasters, use something like csHumanMagic. Combat Styles can be found by browsing to Miscellaneous > Combat Style in the Object Window.

Lastly, the Aggro Radius Behaviour tickbox changes this NPC's behaviour based on distance to the player or to other NPCs.

If someone enters the NPC's Warn radius, the NPC will stop what they're doing and deliver a 'stay back' warning.

If someone enters the NPC's Warn/Attack radius, a warning will be given. If the player or NPC doesn't leave this radius in a timely manner, the NPC will become hostile.

Finally, anyone entering the Attack radius will be attacked by the NPC immediately.

We'll be [Adding and Creating AI Packages](#) shortly, but for now let's go to the Inventory tab.

Set the Default Outfit to FarmClothesOutfit01. This is what Jorn will be wearing when he spawns in. Outfits are collections of clothes, boots, helmets, and so on. Outfits can be found in the Object Window under Items > Outfit.

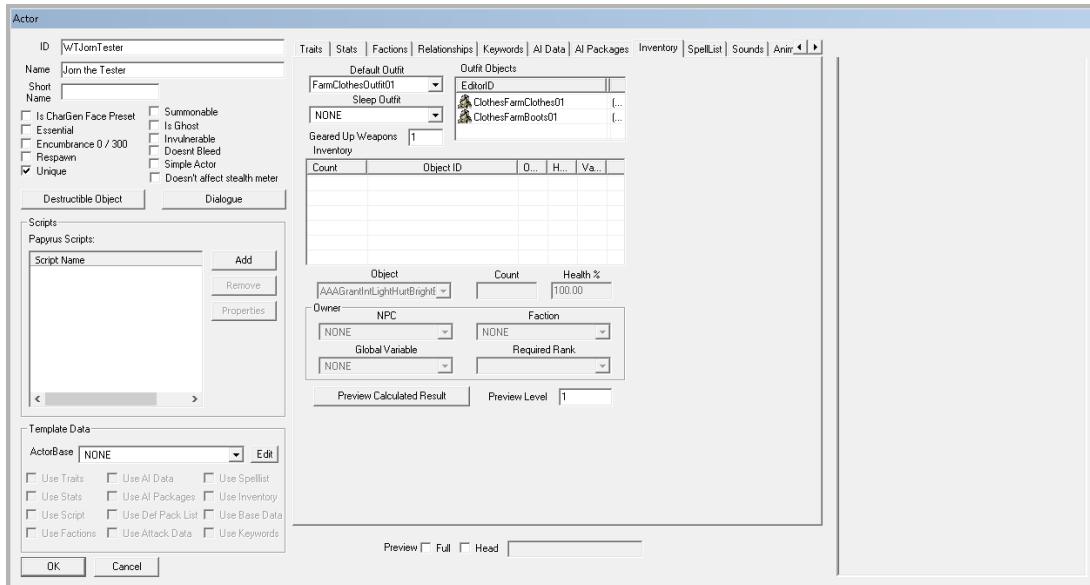


Figure 440 - Adding a default outfit.

Let's give him something to defend himself with. Right-click in the inventory list and select New.

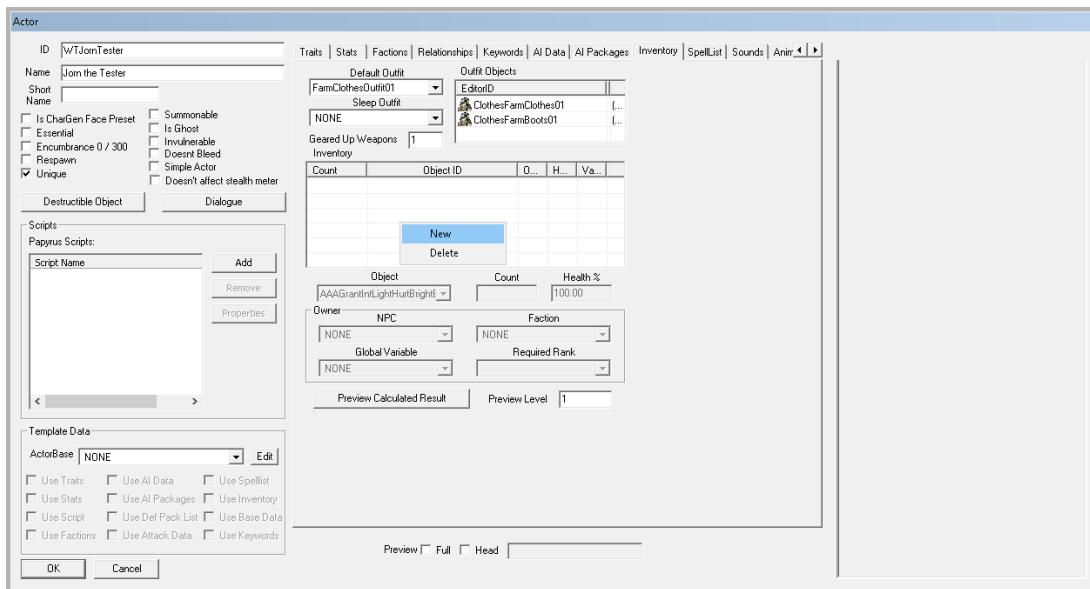


Figure 441 - Adding a new inventory item.

By default this will add AAAGrantInLightHurtBrightBounce into the NPC's inventory. We need to change this to what we want the NPC to actually have.

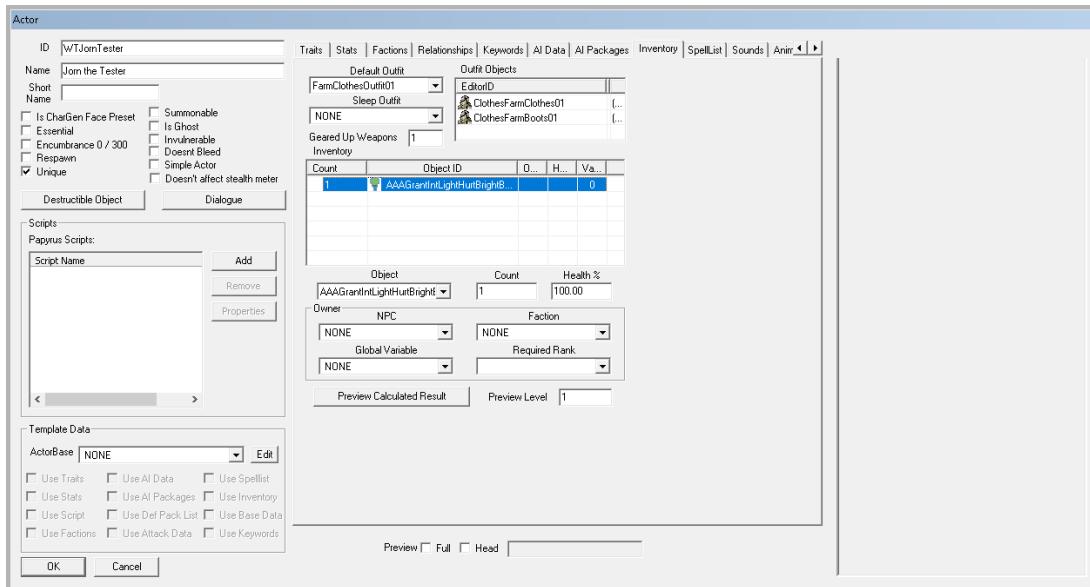


Figure 442 - New inventory item added.

Click on it to select it then set the Object drop-down to IronDagger.

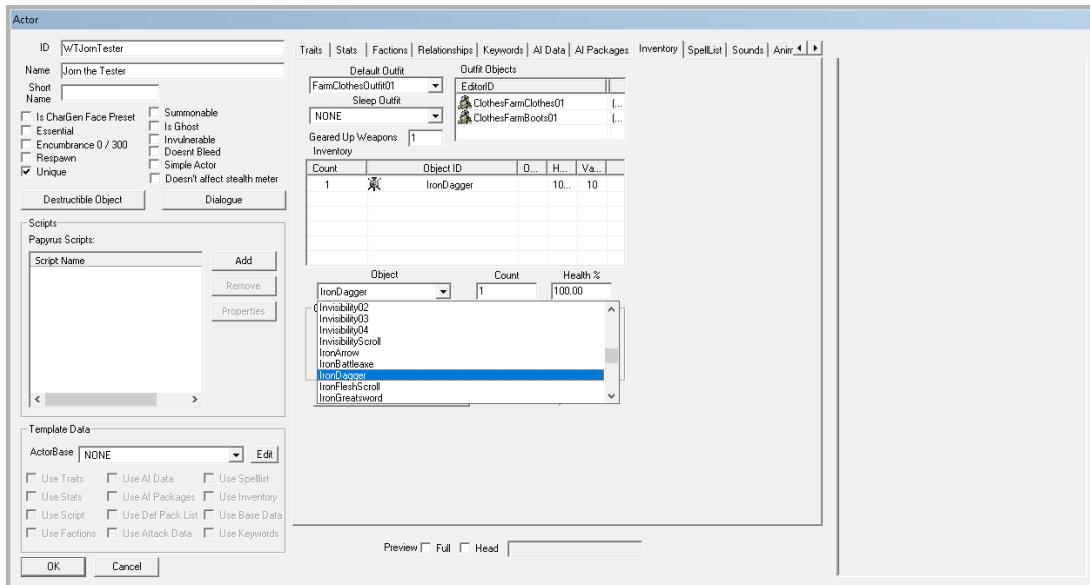


Figure 443 - Changing the first inventory item to IronDagger.

Let's also give him some random inventory items. Add another inventory item and set it to LootCitizenPocketsPoor. This will add a random item to Jorn's inventory when he spawns in. It could be a bit of gold, a low value ring, or some lock picks. Levelled items can be found in the Object Window under Items > LevelledItem.

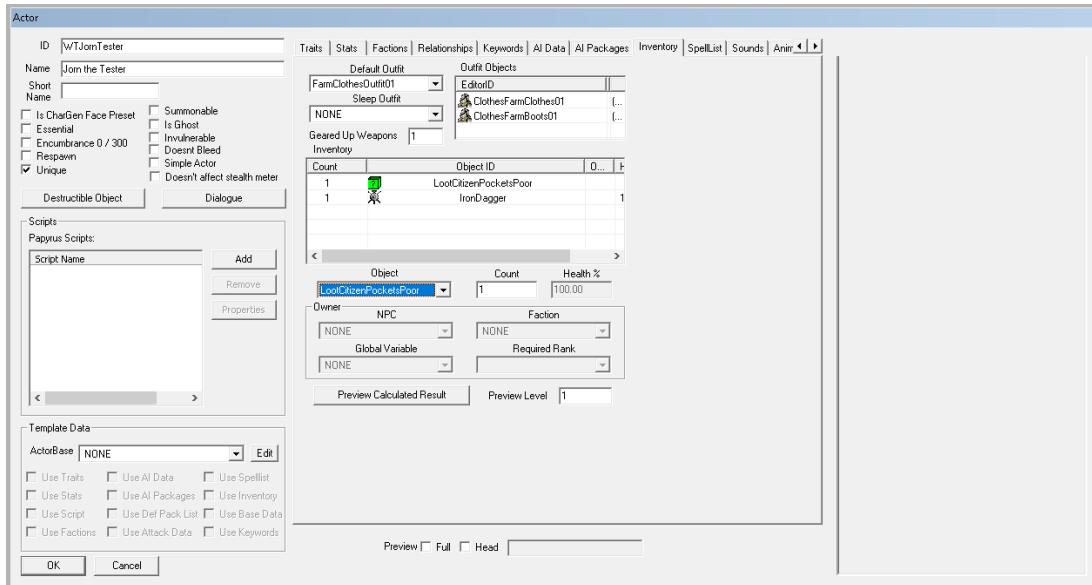


Figure 444 - Added a LootCitizenPocketsPoor levelled item.

Spells and perks can be assigned to an NPC under the SpellList tab.

To add a spell, right-click in the spell list and select New.

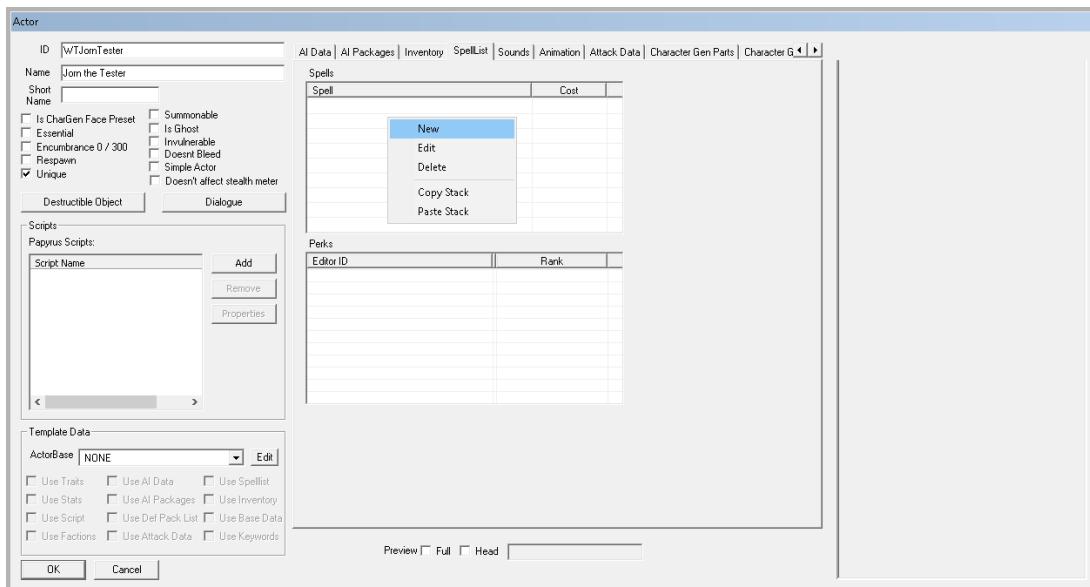


Figure 445 - Adding a spell.

Filter by 'healing', select HealingLeftHand and click OK.

You'll notice that this is different to the regular Healing spell in that the NPC will only use this spell in their left hand, allowing them to simultaneously attack with their right hand weapon.

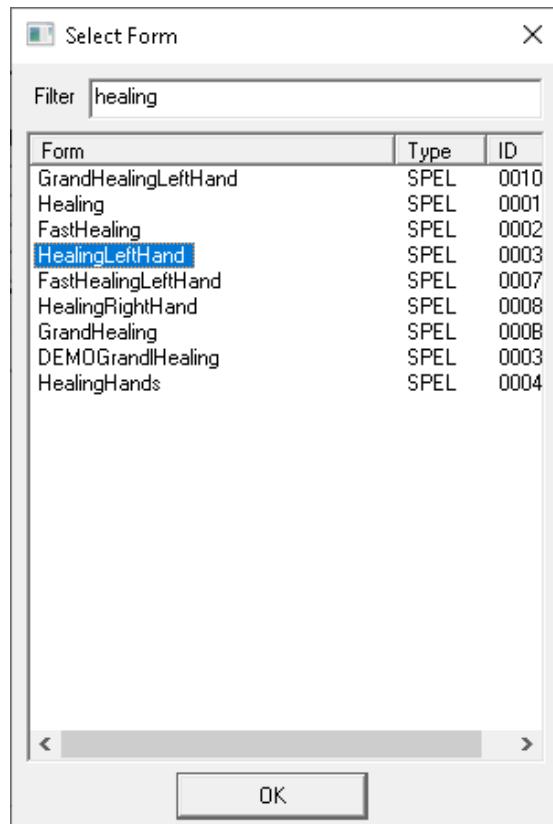


Figure 446 - Adding a left hand healing spell.

We can make this spell cost less magicka by giving Jorn the Novice Restoration Perk. To do this, right-click in the perks list and select Add.

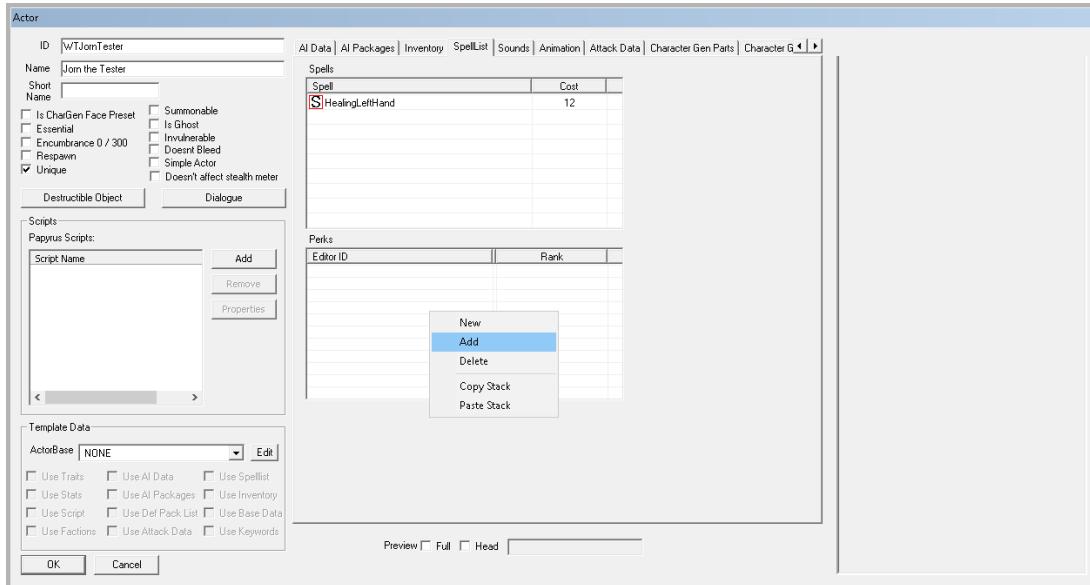


Figure 447 - Adding a perk.

Filter by 'restoration', click on RestorationNovice00 to highlight it then click OK.

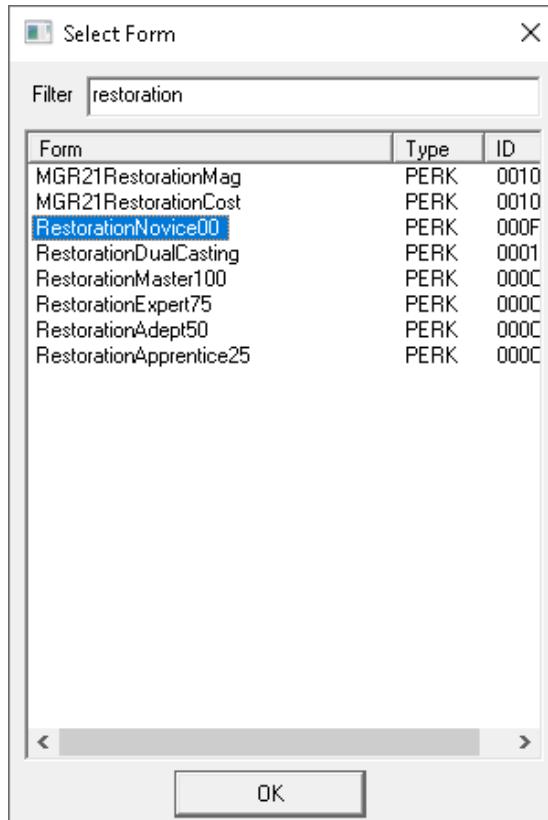


Figure 448 - Adding the Novice Restoration perk.

We can skip over the Sounds, Animation and Attack Data tabs and go to the Character Gen Parts tab next.

Here you can customize the NPC's head colours, such as hair colour, skin colour, face paint, as well as hair style.

To see the NPC's face in the preview area, tick Head at the bottom.

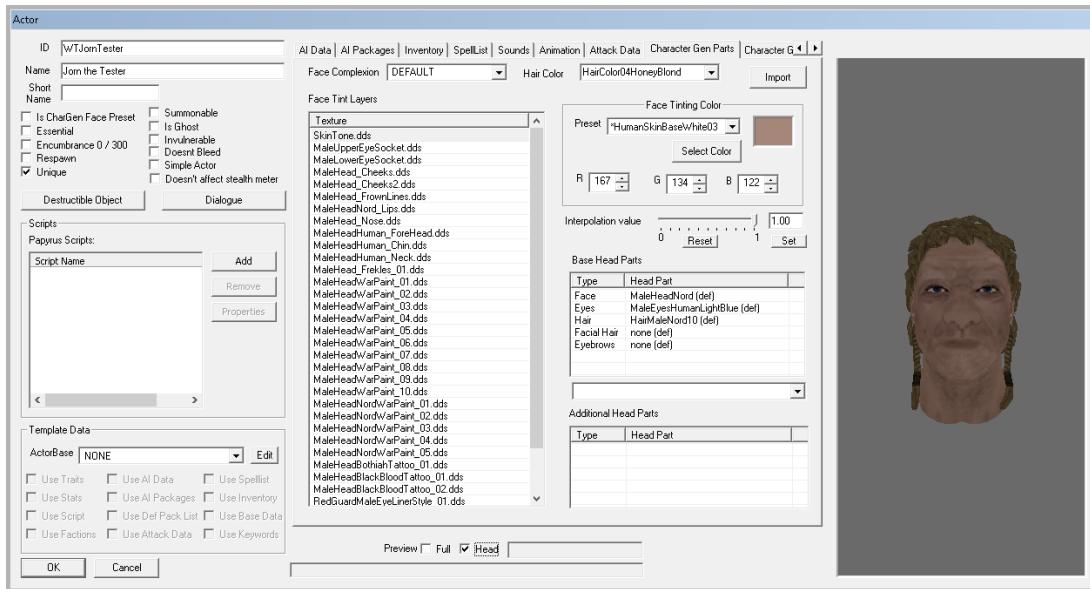


Figure 449 - Character Gen Parts tab.

Let's start customizing Jorn by changing his hair style.

In the Basic Head Parts section, click on Hair.

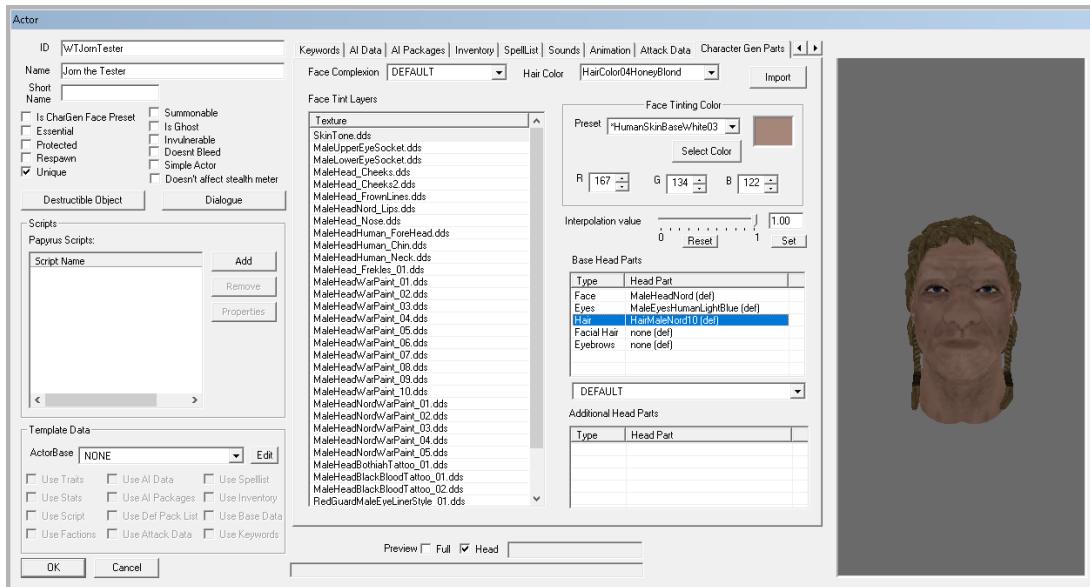


Figure 450 - Changing an NPC's hair style.

I'm going to set it to HairMaleNord14.

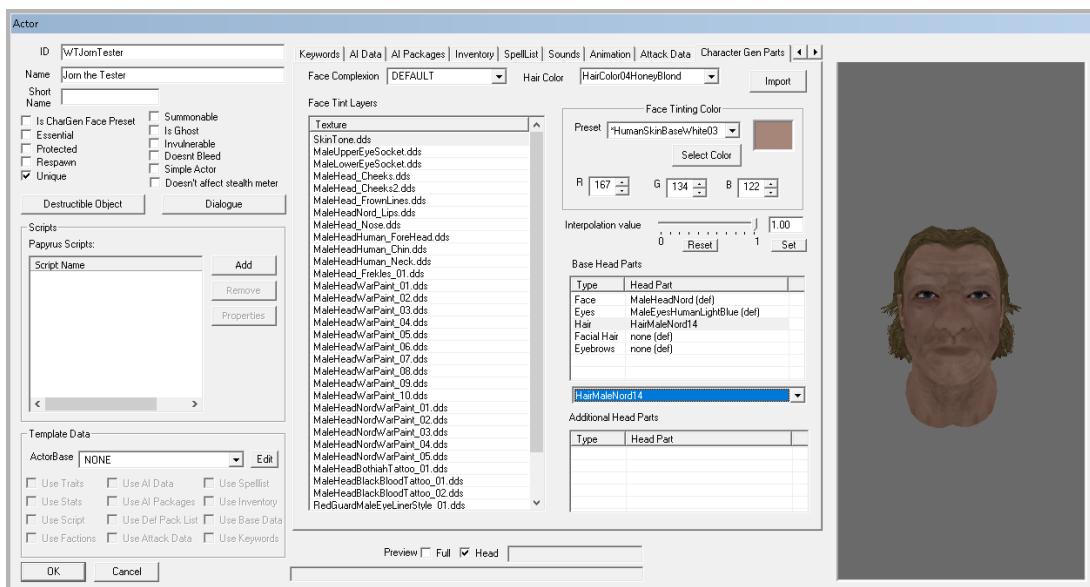


Figure 451 - Hair style changed.

To change an NPC's hair colour, change the Hair Colour drop-down near the top. In this example, I changed it to HairColour08MediumBrown.

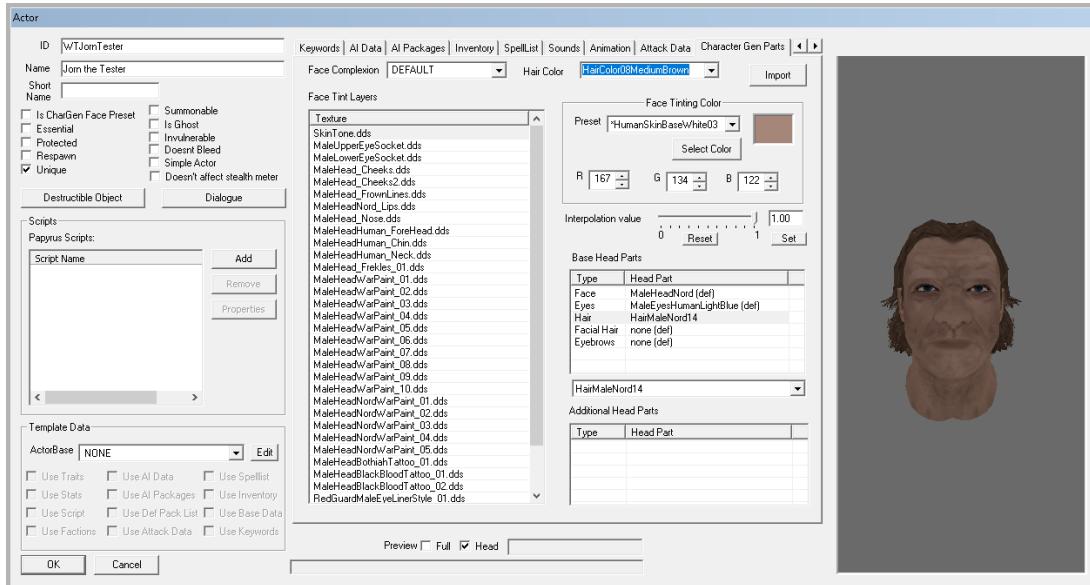


Figure 452 - Changing an NPC's hair colour.

Next, let's give him some eyebrows. In the Basic Head Parts section I set Eyebrows to BrowsMaleHumanoid02.

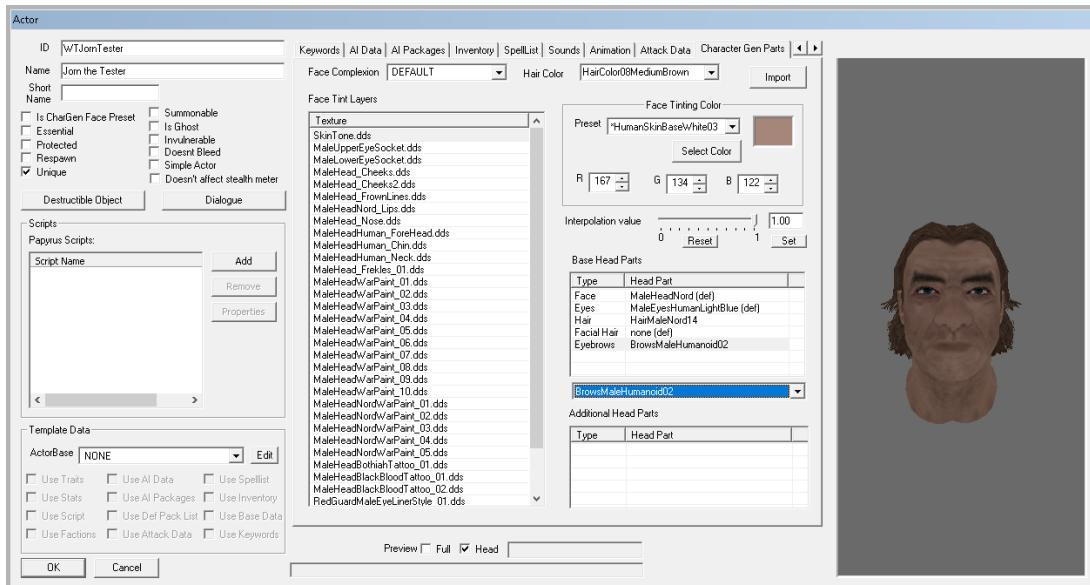


Figure 453 - Changing an NPC's eyebrows.

Give him some facial hair by setting Facial Hair to HumanBeard08.

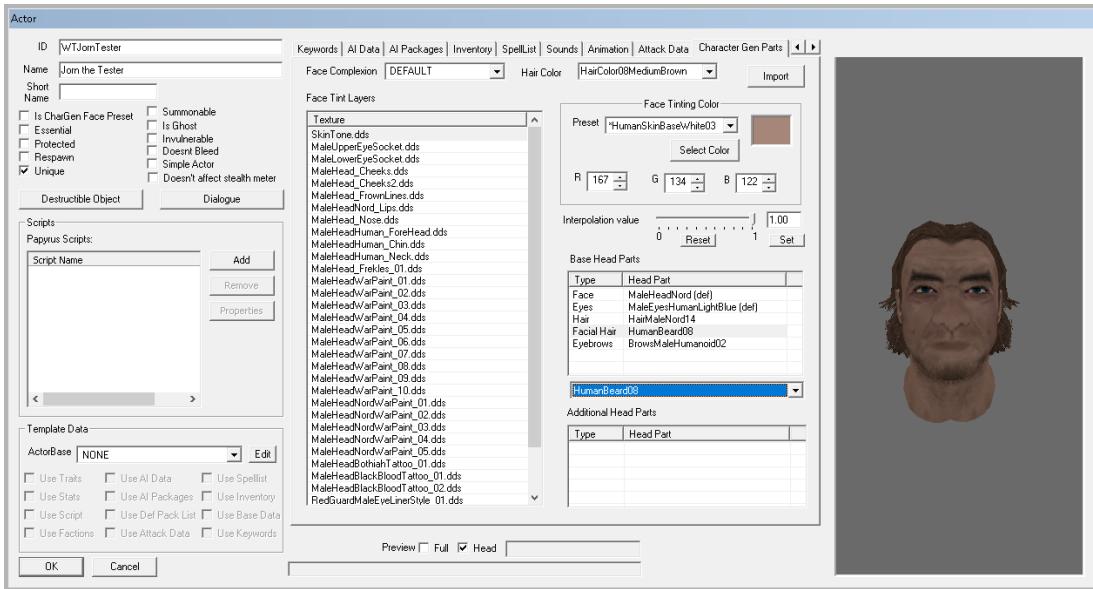


Figure 454 - Changing an NPC's facial hair.

And change his eye colour by setting Eyes to MaleEyesHumanHazel.

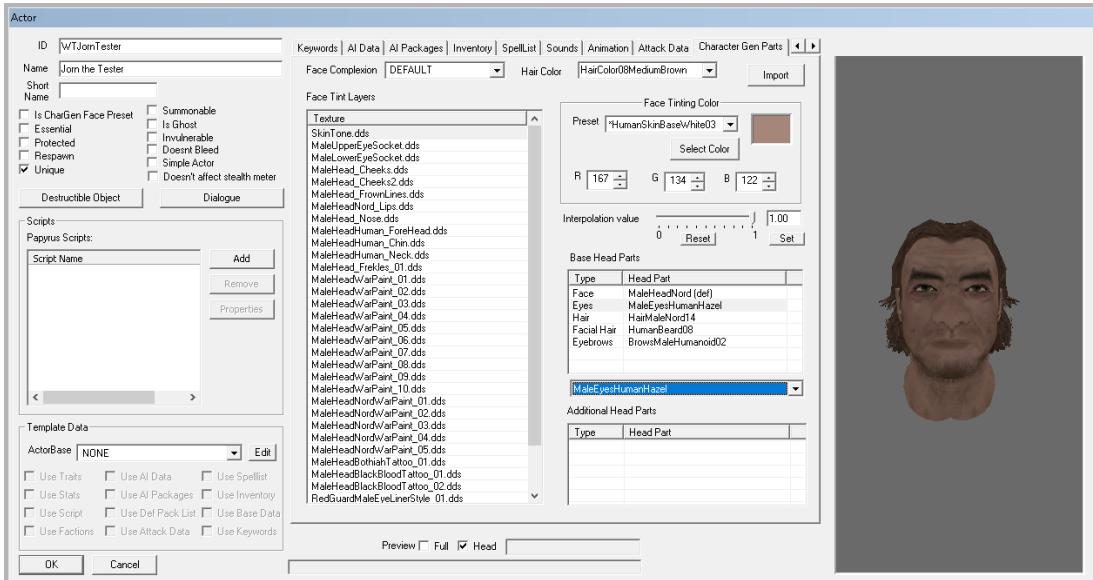


Figure 455 - Changing an NPC's eye colour.

Maybe Jorn hasn't been sleeping well lately, what with these dragon attacks. In the Face Tint Layers, click on MaleUpperEyeSocket.dds to highlight it, then under Face Tinting Colour set the Preset drop-down to BrownTintDark. Change the Interpolation-value slider below it to about 0.40. 1.00 means the value is at full-strength, 0 would effectively hide the shading.

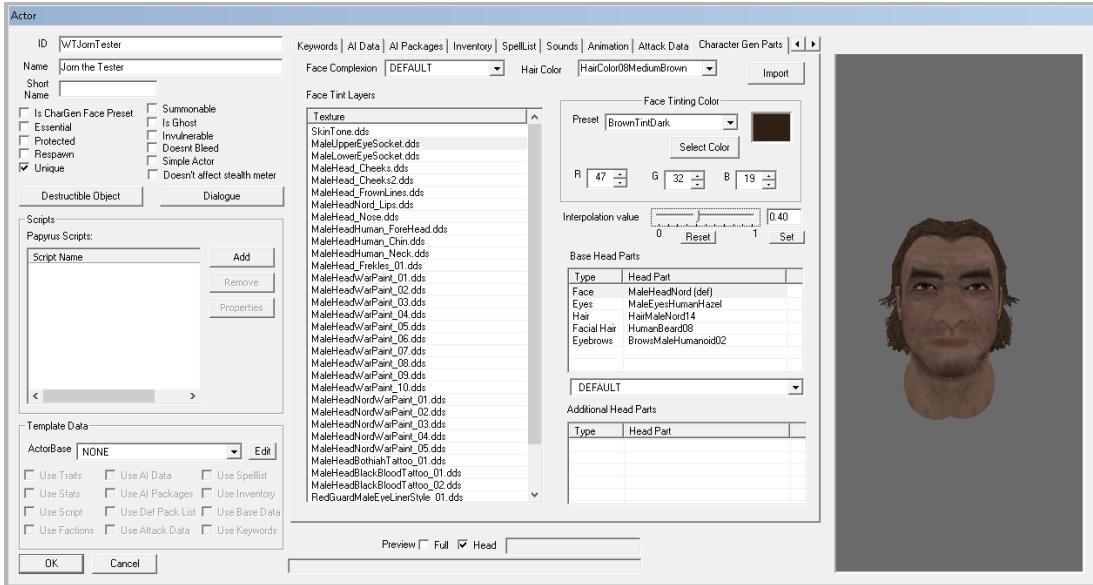


Figure 456 - Changing an NPC's face tint.

Perhaps Jorn doesn't bathe as often has he should. We can add dirt to his face by scrolling down to MaleHeadDirt\_01.dds in Face Tint Layers, set the Preset to BrownTintDark then set the Interpolation Value slider to about 0.55.

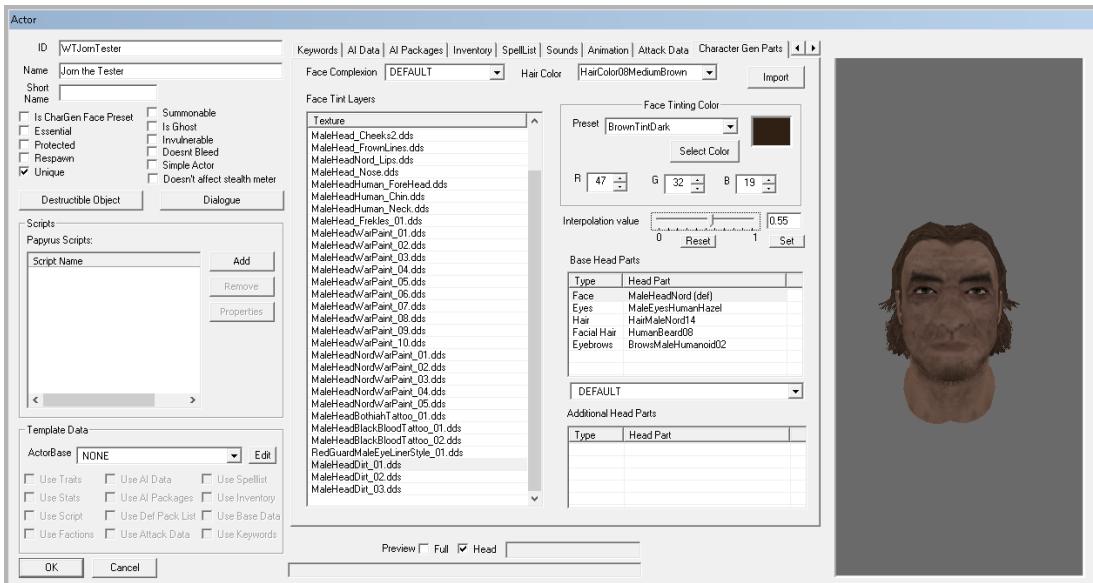


Figure 457 - Adding dirt to an NPC's face.

**Note:** You can choose a custom colour by clicking on the Select Colour button, but just be aware that colour selection can be a bit buggy so I generally just stick with the default presets.

Lastly, switch over to the Character Gen Morphs tab. Here we can adjust the shape of the NPC's facial features.

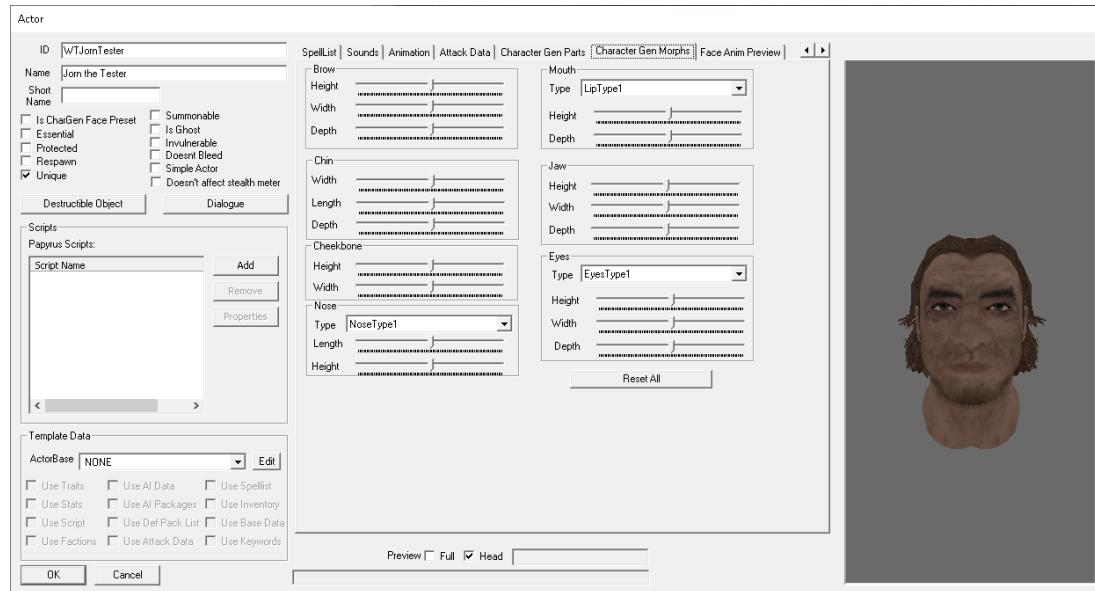


Figure 458 - Character Gen Morphs tab.

In the following screenshot, I made a few adjustments to the NPC's face. His nose was set to NoseType11, mouth to LipType11 and eyes to EyesType19.

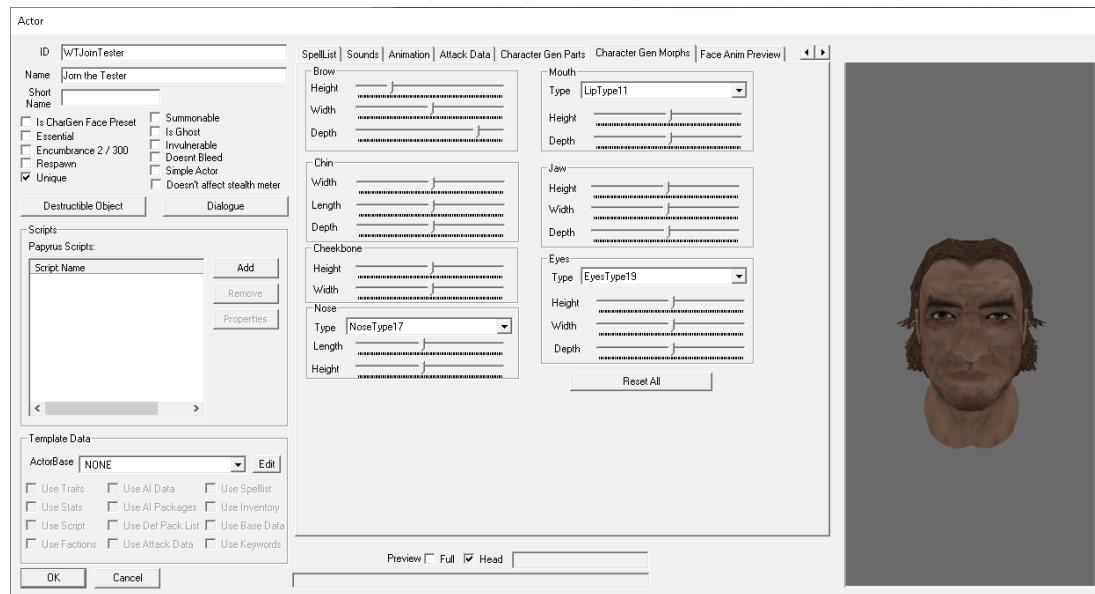


Figure 459 - NPC's face after some adjustments.

Now that our NPC is mostly done, we need to build facegen data.

To do this, click on WTJornTester in the Object Window to highlight him and press CTRL + F4.

Click Yes to the Confirm pop-up.

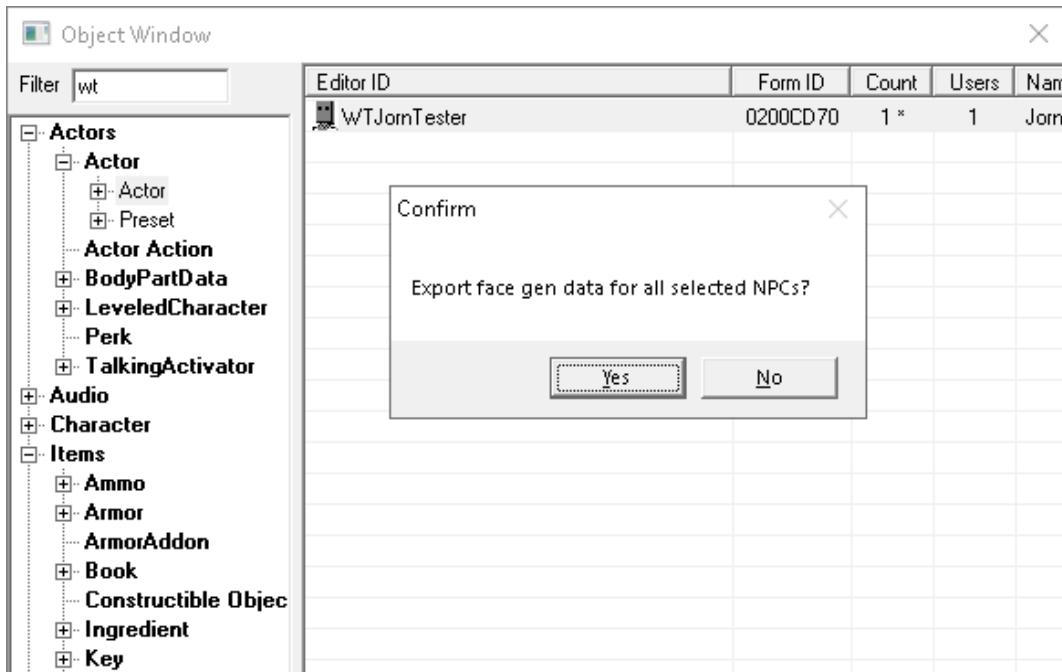


Figure 460 - Building facegen data.

Once it's finished, click OK to the Done pop-up.

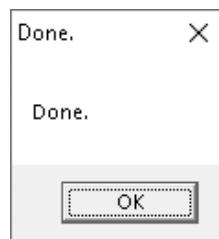


Figure 461 - Done.

The mesh and texture generated can be found under  
 Skyrim\Data\meshes\actors\Character\FaceGenData\FaceGeom\<YourModName>.esp or  
 Skyrim Special Edition\Data\meshes\actors\Character\FaceGenData\FaceGeom\<YourModName>.esp and  
 Skyrim\Textures\actors\Character\FaceGenData\FaceTint\<YourModName>.esp or  
 Skyrim Special Edition\Textures\actors\Character\FaceGenData\FaceTint\<YourModName>.esp.

Before we place Jorn in the world, let's give him a script to clean up his body if he gets killed.

Double-click or right-click on WTJornTester and select Edit.

In the Scripts section, click on the Add button.

**Important:** Adding a script to an NPC may crash the Creation Kit. If you've added custom .bsa archives to SArchiveList or SResourceArchiveList in your SkyrimEditor.ini file, make sure you've extracted the .pex files from them to your Skyrim\Data\Scripts or Skyrim Special Edition\Data\Scripts folder.

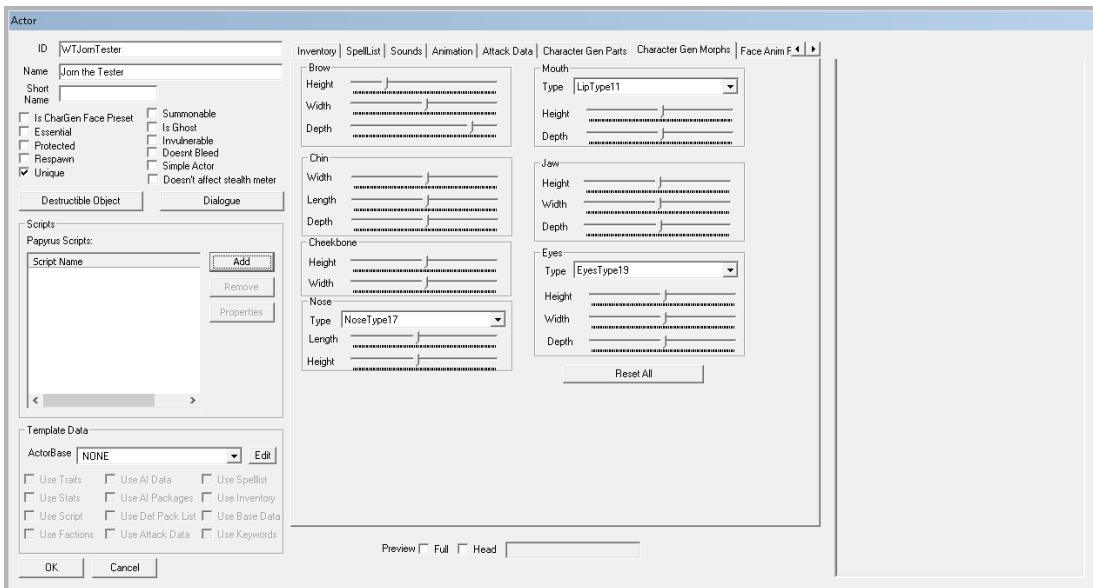


Figure 462 - Adding a script.

Filter by 'wideadbodycleanup', click on the WIDeadBodyCleanupScript script in the scripts list then click OK to add it to the NPC.

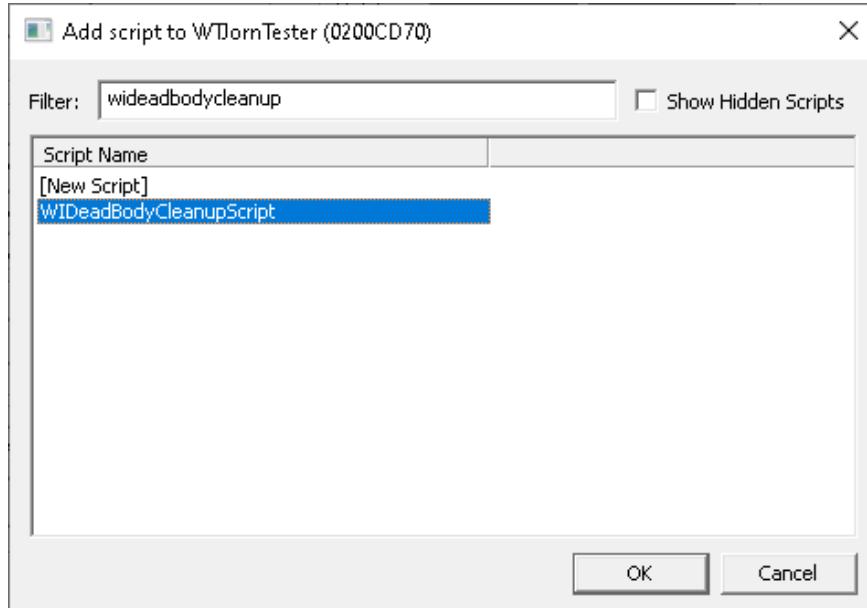


Figure 463 - Adding WIDeadBodyCleanupScript.

If Jorn had a grave, we can use this script to transfer his inventory to a coffin like some named NPCs have in major cities, but for now it's fine to just transfer his corpse to the dead body cell.

In the Papyrus Scripts list, click on WIDeadBodyCleanupScript to highlight it then click on the Properties button.

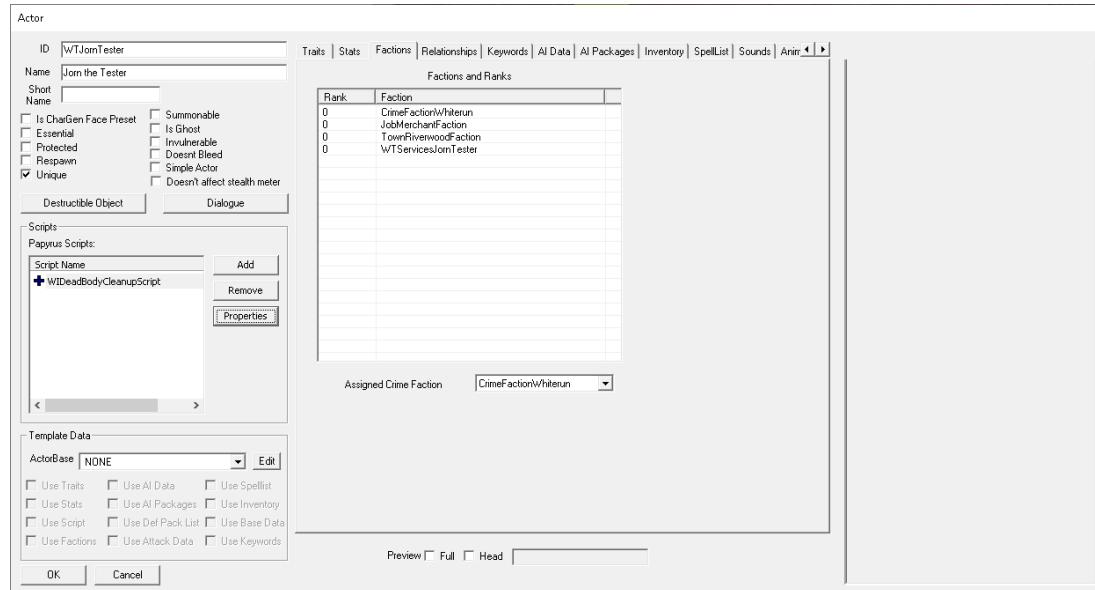


Figure 464 - Opening properties for WIDeadBodyCleanupScript.

Click on the Auto-Fill All button. Click OK to the Property Auto-Fill pop-up.

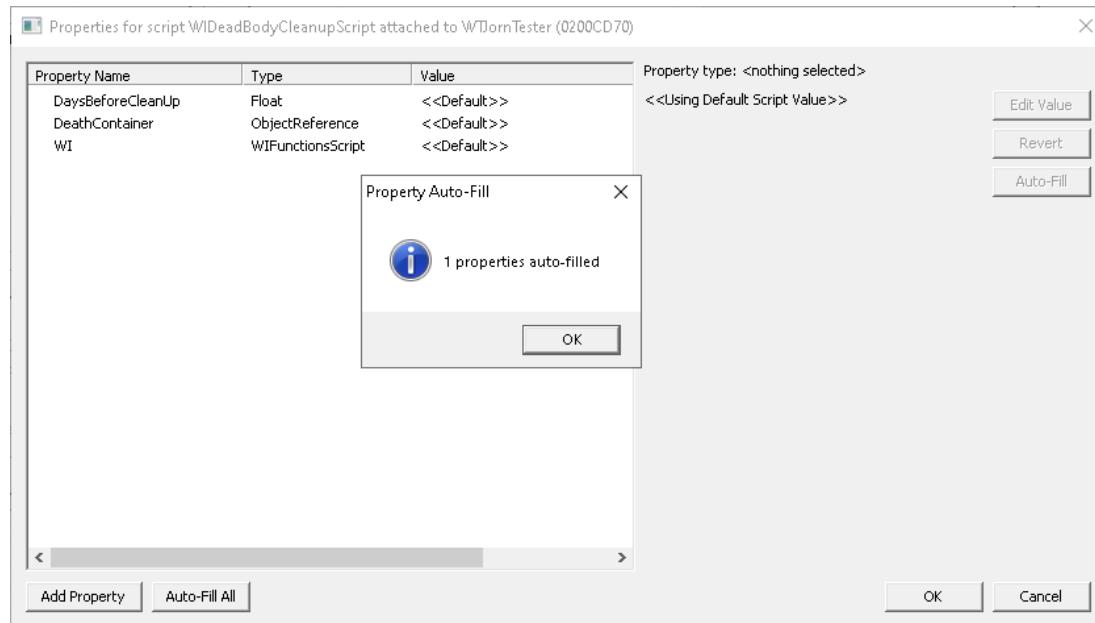


Figure 465 - Auto-fill properties.

Click OK to close out of script properties.

Lastly, let's place our NPC in the world.

Click OK to close out of Actor properties for now.

Click on WTJornTester in the Object Window to highlight him, then drag and drop him into the render window to place him into the world.

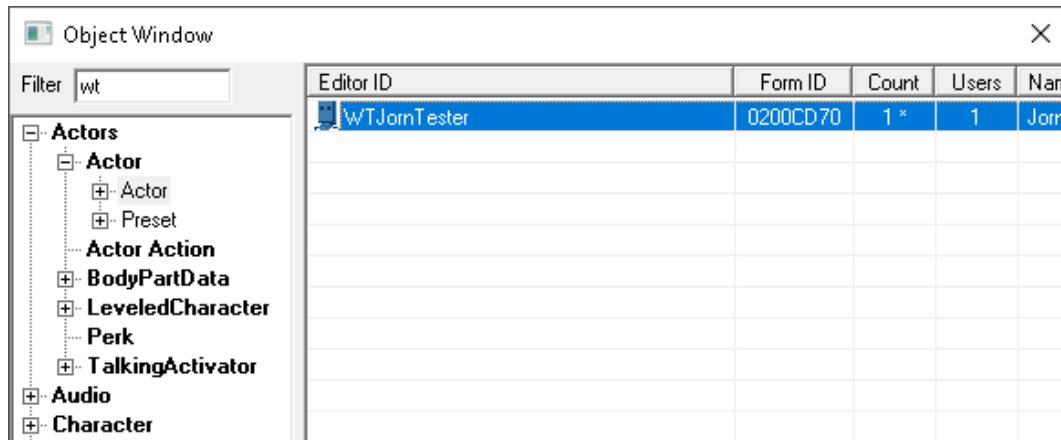


Figure 466 - WTJornTester highlighted in the Object Window.

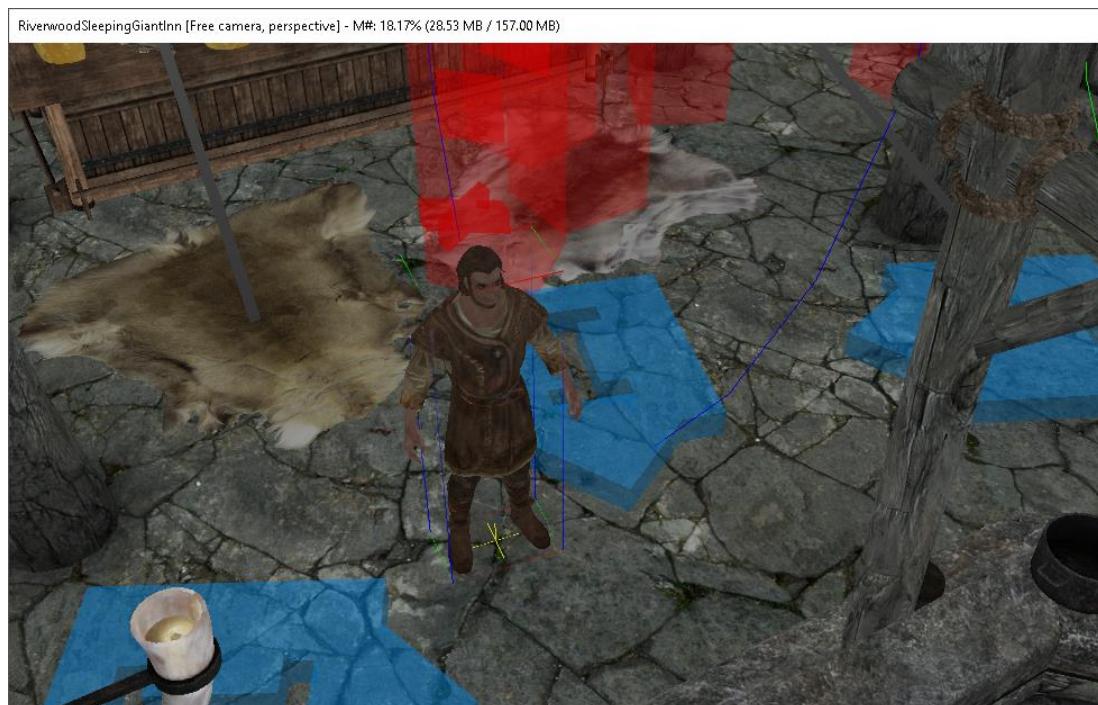


Figure 467 - WTJornTester added to the Riverwood inn.

For more information on what each field does, see the [Actor](#) article on the Creation Kit wiki.

## ADDING AND CREATING AI PACKAGES

AI packages are used to set up an NPC's daily schedule. They are used to define when an NPC sleeps, eats, works or travels.

Packages are added to an NPC under the AI Packages tab.

AI Packages can be added here to give the NPC a daily schedule. In this section we're going to continue with our previous example by adding some packages to our Jorn the Tester NPC.

To add a package, right-click in the packages list and select Add.

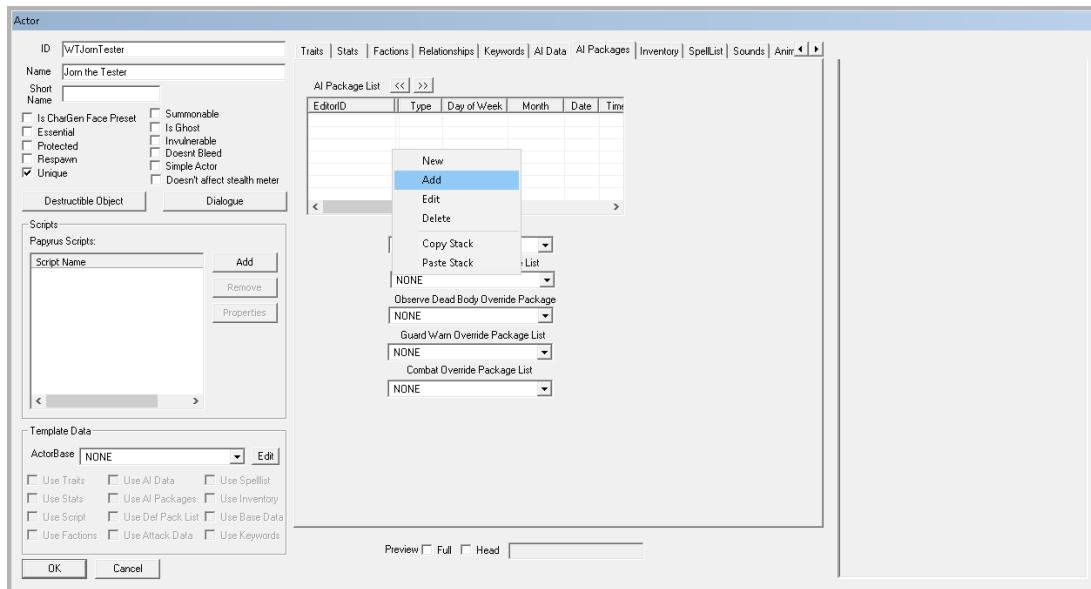


Figure 468 - AI Packages tab.

Filter by ‘defaultsleep’, click on DefaultSleepEditorLoc0x7 to highlight it then click OK.

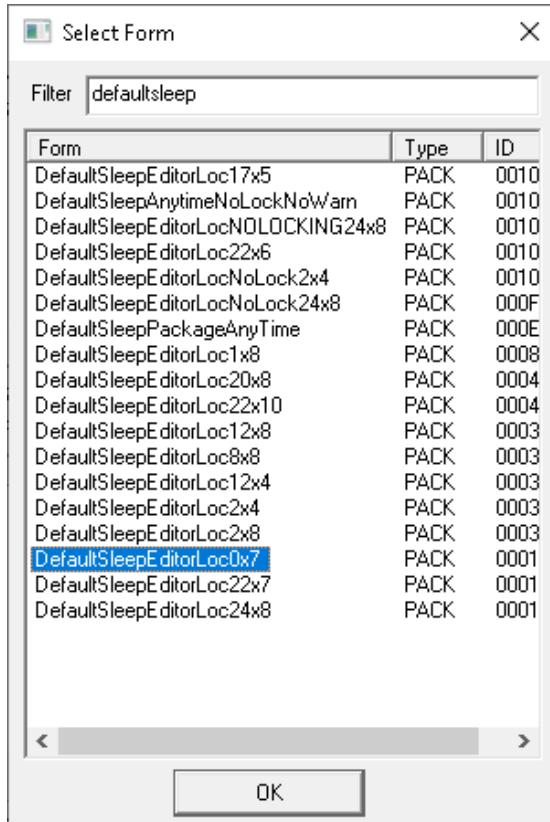


Figure 469 - Adding a sleep package.

This package will make the NPC sleep at its editor location from midnight to 7:00 AM. Editor location just means the spot at which the NPC was placed in the Creation Kit.

Let's add another package. Right-click in the packages list again and select Add.

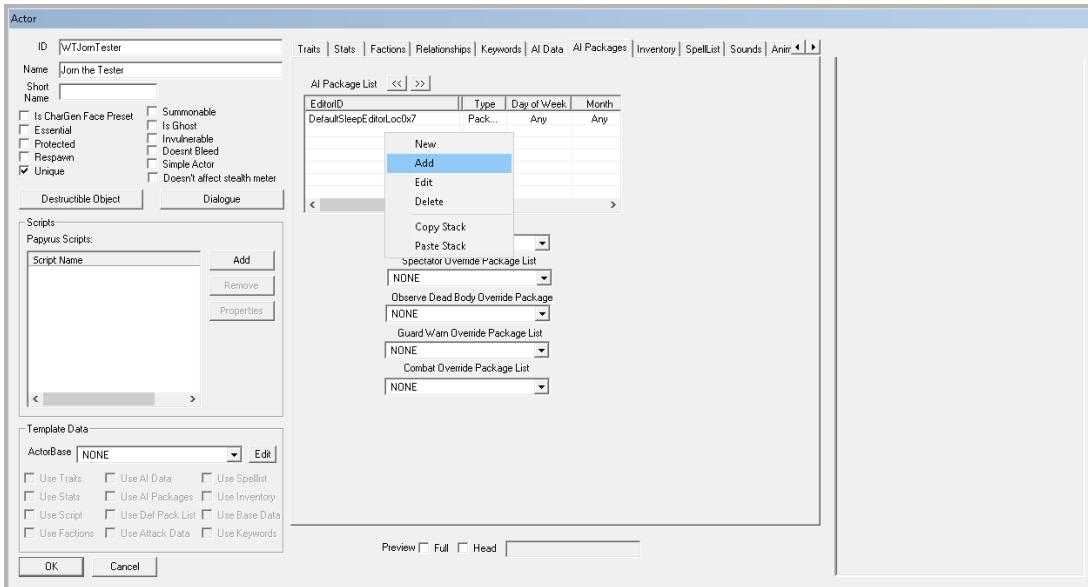


Figure 470 - Adding a second package.

Filter by 'defaulteat', click on DefaultEatEditorLoc8x1 to highlight it then click OK.

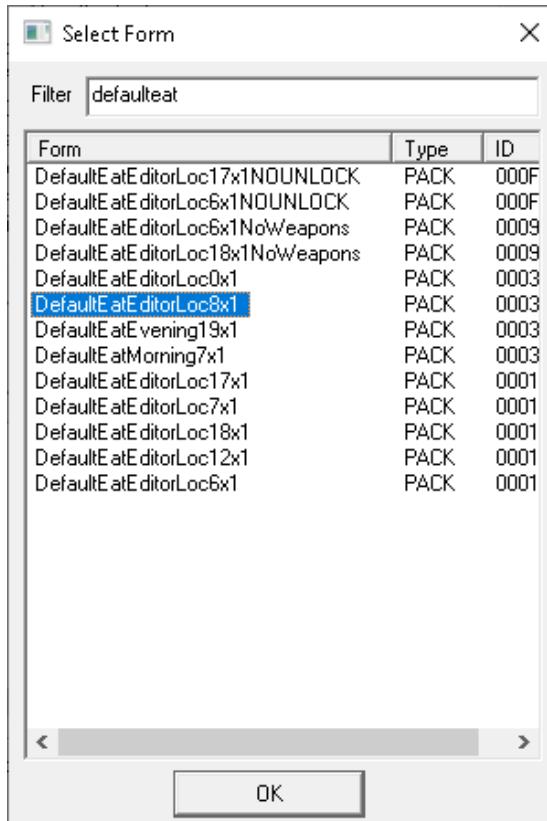


Figure 471 - Adding an eat package.

This package will make the NPC eat from 8:00 AM to 9:00 AM.

Use the '<<' and '>>' buttons to ensure DefaultEatEditorLoc8x1 is at the top of the list.

Let's add another eat package for dinner time.

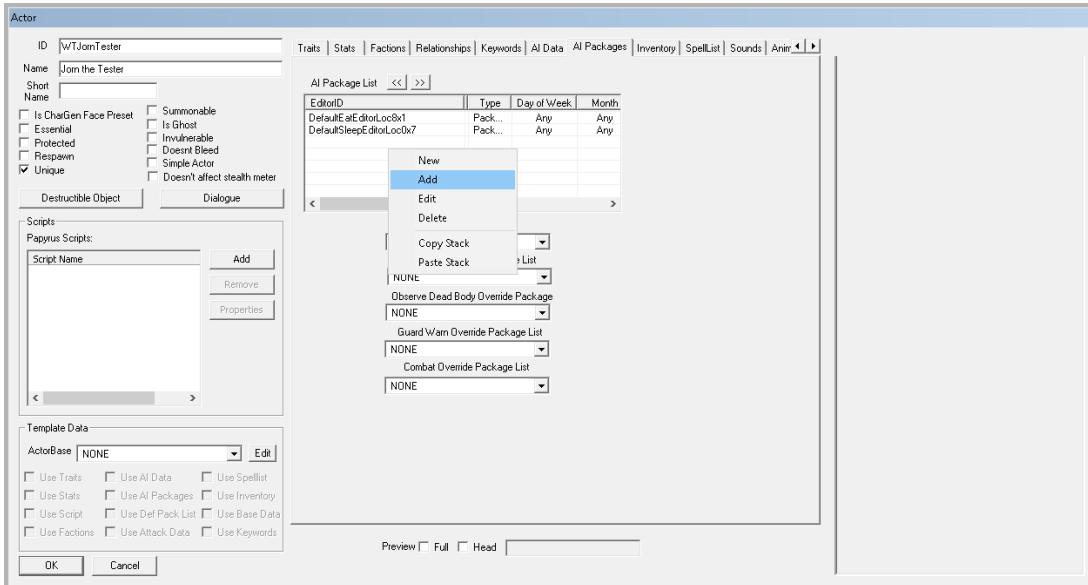


Figure 472 - Adding another eat package.

Filter by 'defaulteat' again, this time select DefaultEatEvening19x1 then click OK.

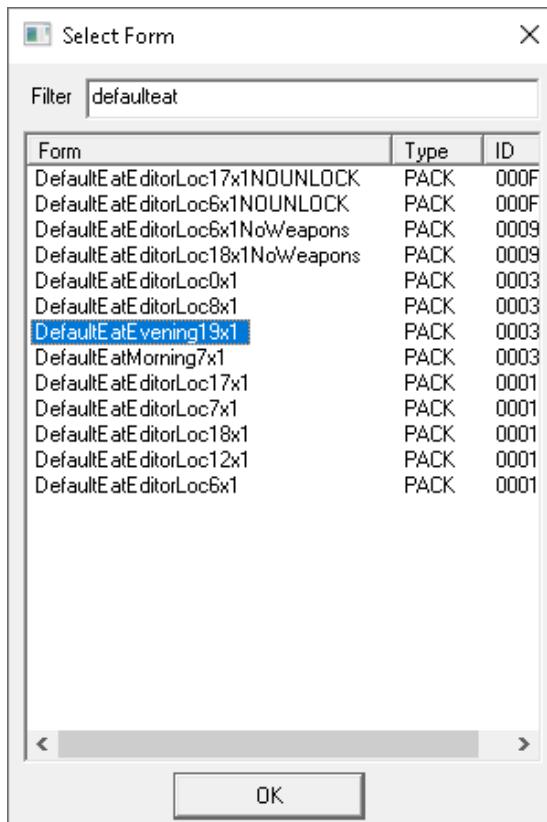


Figure 473 - Adding another eat package.

Next, let's give this NPC something to do during the day. This time, let's create a custom AI package.

Right-click in the packages list and select New.

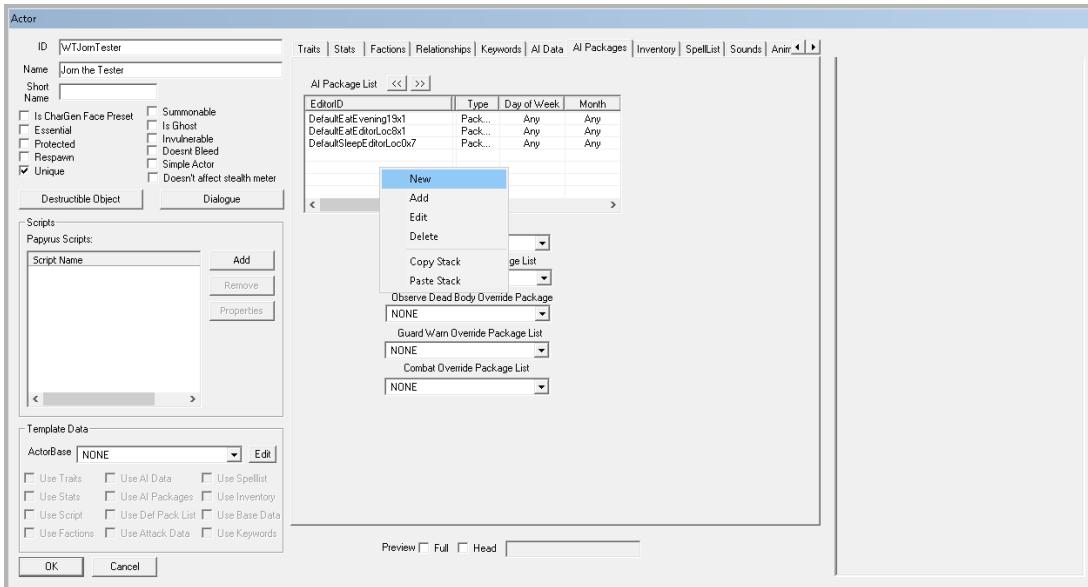


Figure 474 - Creating a new package.

Set the package ID. For this example, I went with WJTJornSandboxRiverwood9x10 as I plan to have Jorn wander around outside in Riverwood from 9:00 AM until 7:00 PM.

**Note:** Make a habit of adding the active hours of the package to the package ID.

To accomplish this, first let's set the Package Template to Sandbox. Sandbox packages will allow the NPC to wander around and interact with idle markers and furniture within a defined radius.

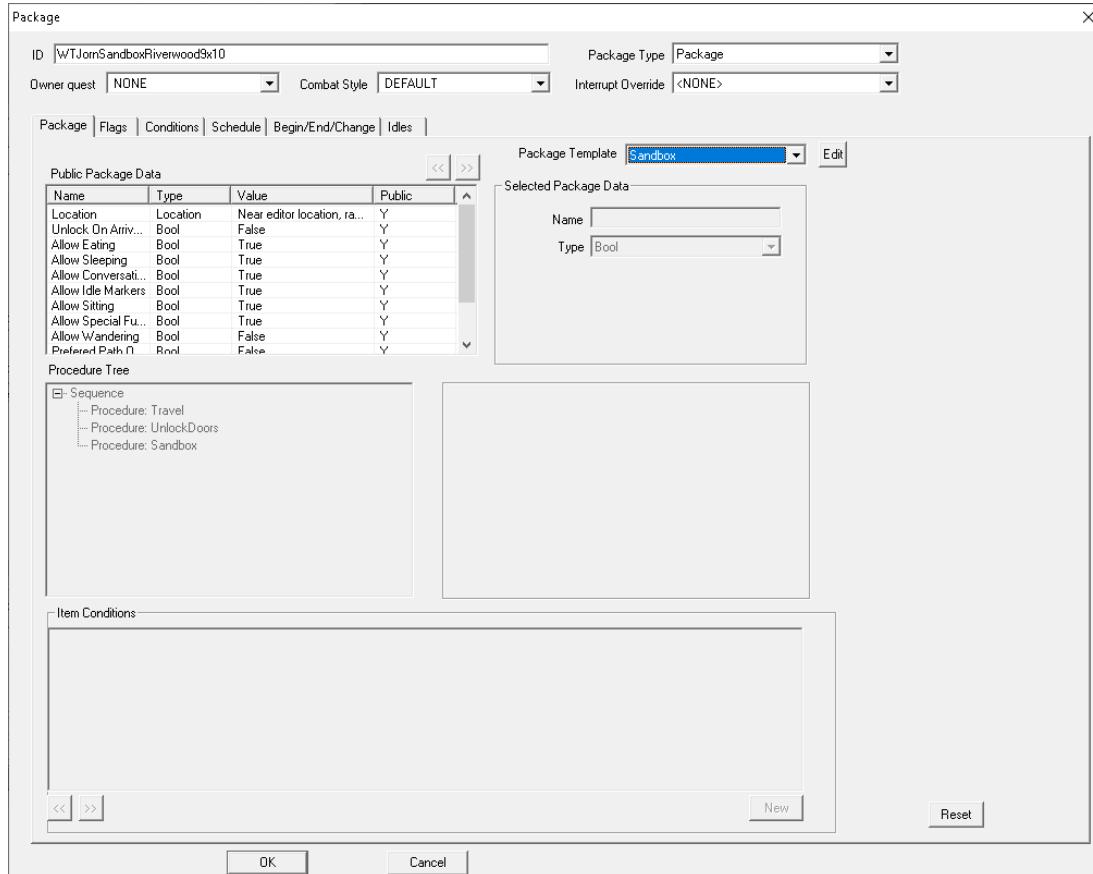


Figure 475 - Package tab.

Under Public Package Data, click on Location to highlight it, then set the Radius field to 4096.

**Note:** A world space cell is 4096 x 4096 units in size.

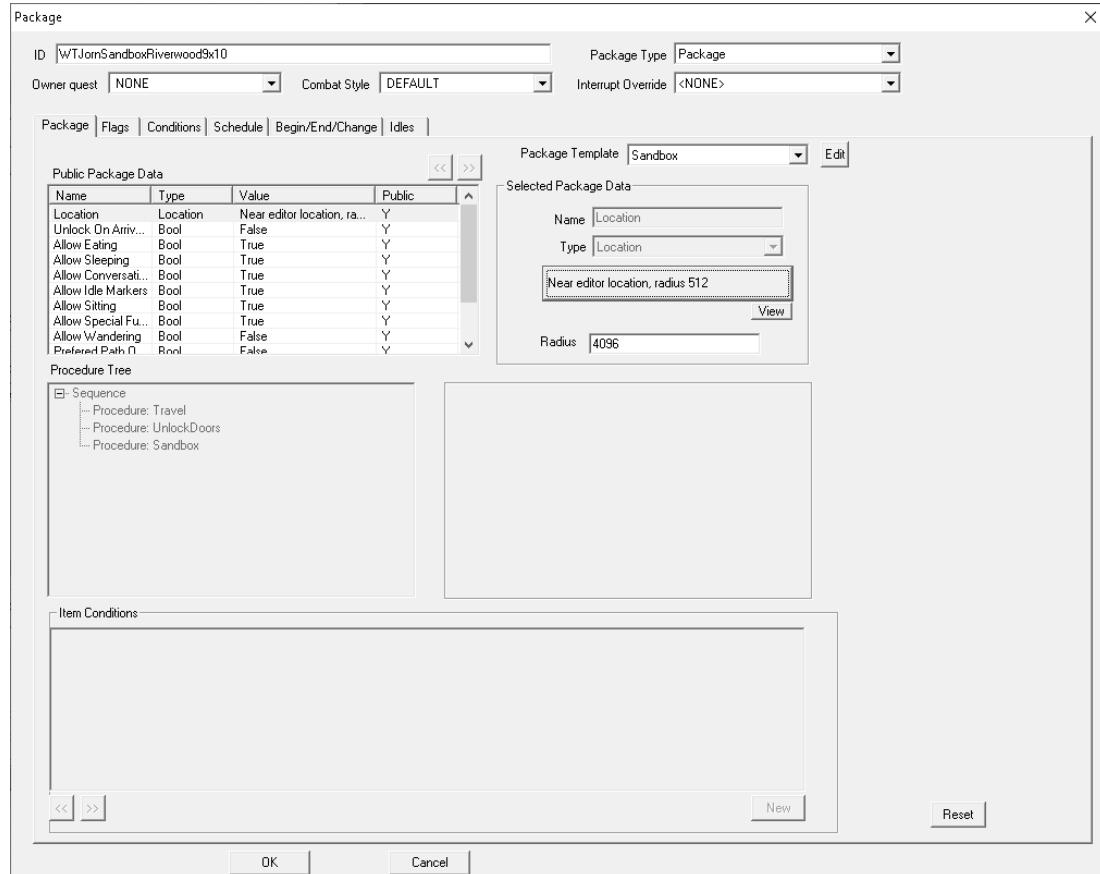


Figure 476 - Increasing the sandbox radius.

Click on the button above it that currently reads 'Near editor location, radius 512'.

Select Near Reference, then click on the Select Reference button to choose the object in the render window that the NPC should sandbox around.

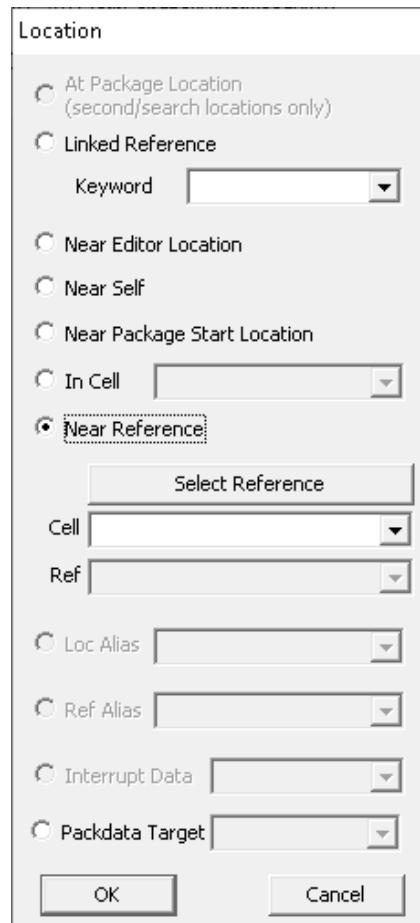


Figure 477 - Choosing the reference to sandbox around.

Select Riverwood's LocationCenterMarker marker. The LocationCenterMarker marker is the XMarker with the yellow box above it.



Figure 478 - Riverwood's LocationCenterMarker marker.

With the reference selected, click OK.



Figure 479 - Reference added to location.

Scroll down to Allow Wandering and tick the Value tickbox to enable it. This will let the NPC wander to a randomly chosen spot within the sandbox radius. If this is not ticked, the NPC will only interact with idle markers and furniture within the sandbox radius.

If you wanted to set how often an NPC changes what they're doing, increase the Energy value under Public Package Data. By default this is set to 50.

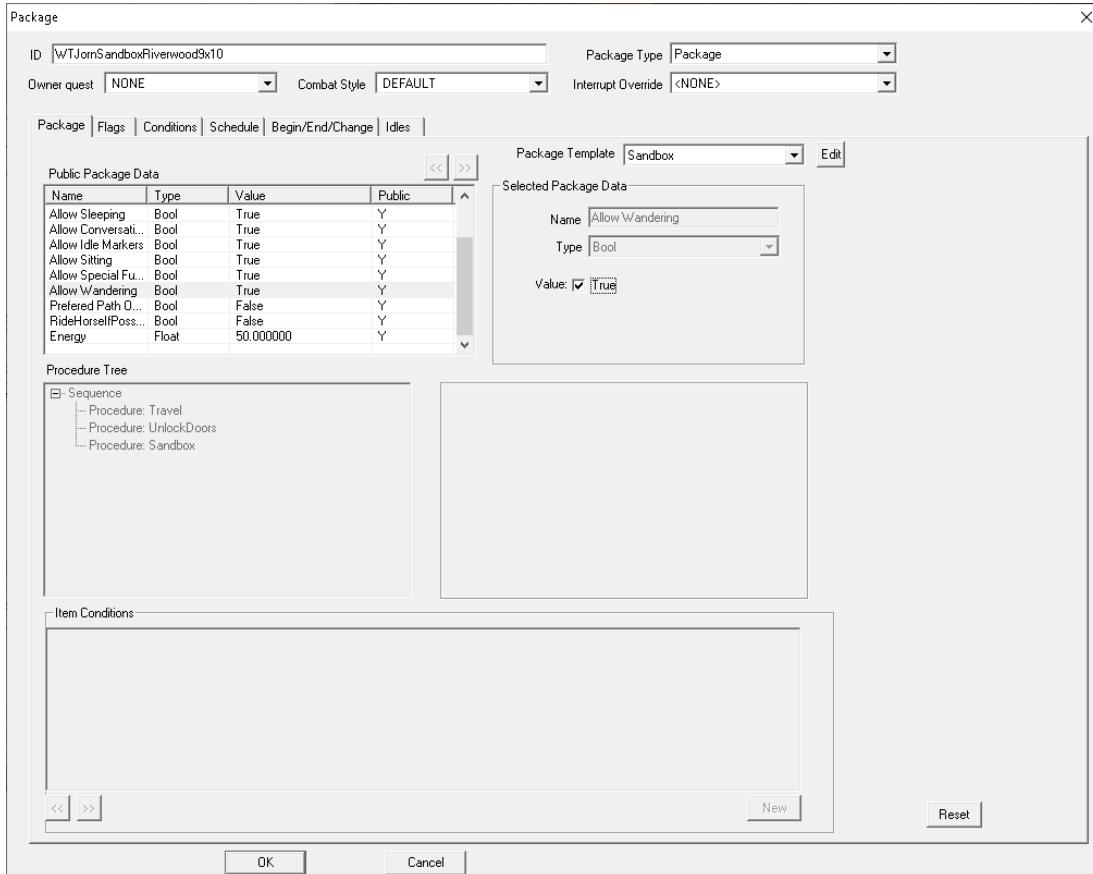


Figure 480 - Enabling Allow Wandering.

Go to the Schedule tab. Set the Hour drop-down to 9 and the Duration field to 10. The NPC will only use this sandbox package from 9:00 AM until 7:00 PM.

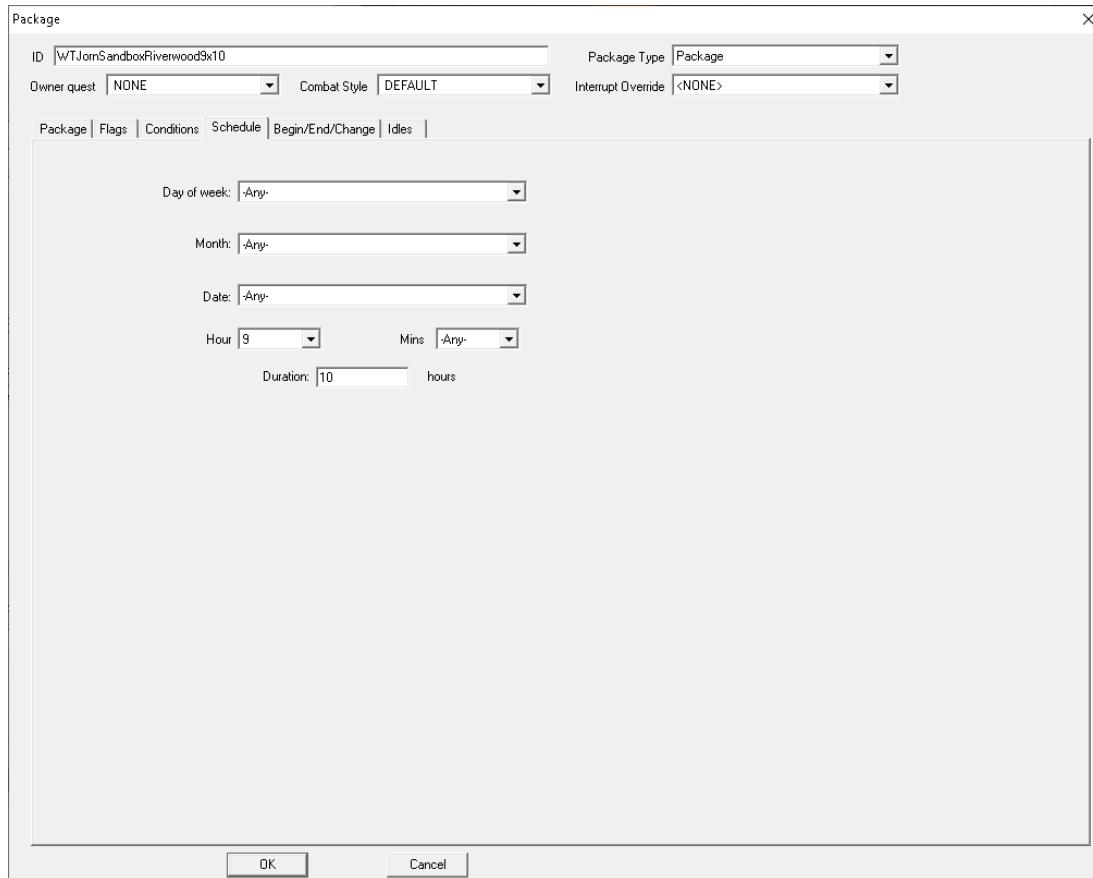


Figure 481 - Adding a start and stop time to a package.

Click OK to close out of Package properties.

Our AI Packages tab should now look like this:

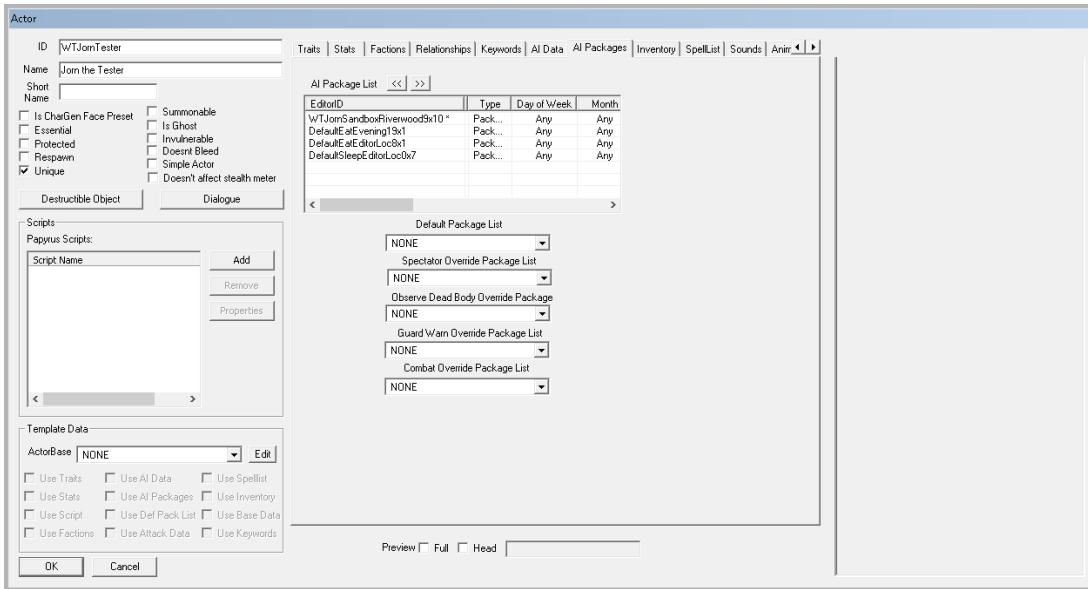


Figure 482 - AI Packages tab with four packages set up.

Again, use the '<<' and '>>' buttons to ensure WITJornSandboxRiverwood9x10 is at the top of the list.

Let's add one more package to cover the evening hours.

Right-click in the packages list and select Add.

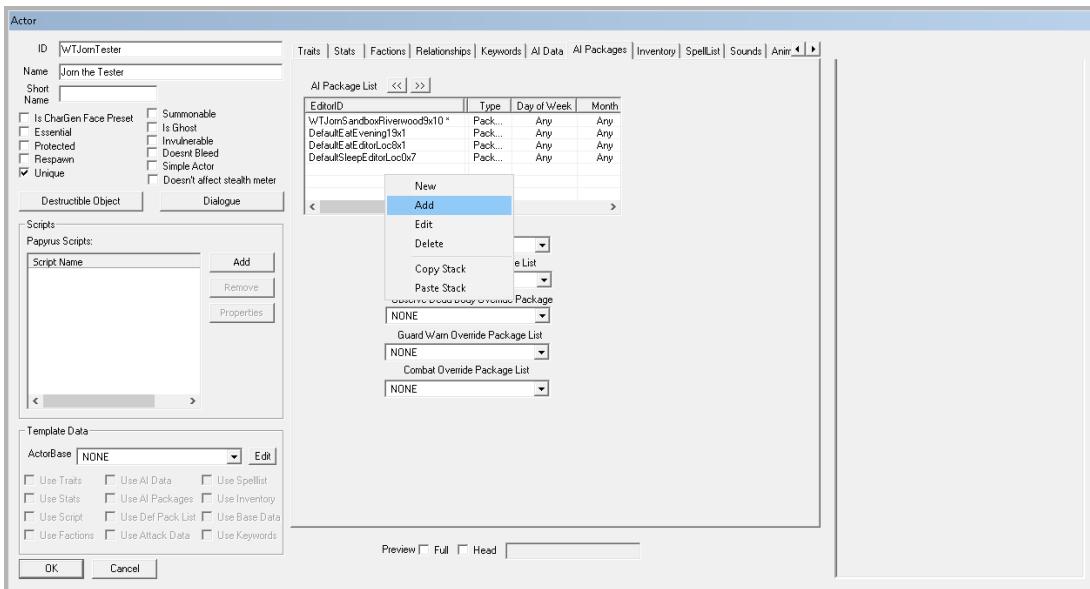


Figure 483 - Adding a fifth package.

Filter by ‘defaultsandbox’, click on DefaultSandboxEditorLocation1024 to highlight it then click OK.

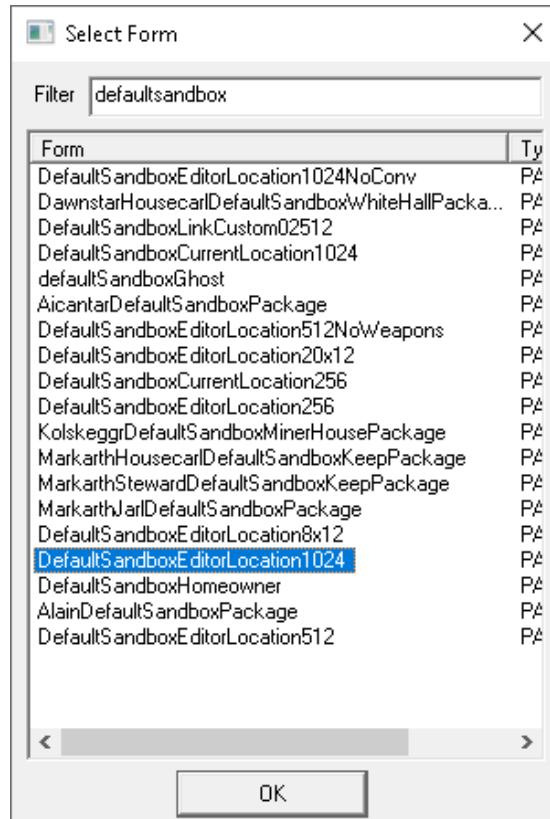


Figure 484 - Adding a DefaultSandboxEditorLocation1024 package.

**Important:** Packages are processed sequentially starting from the topmost package.

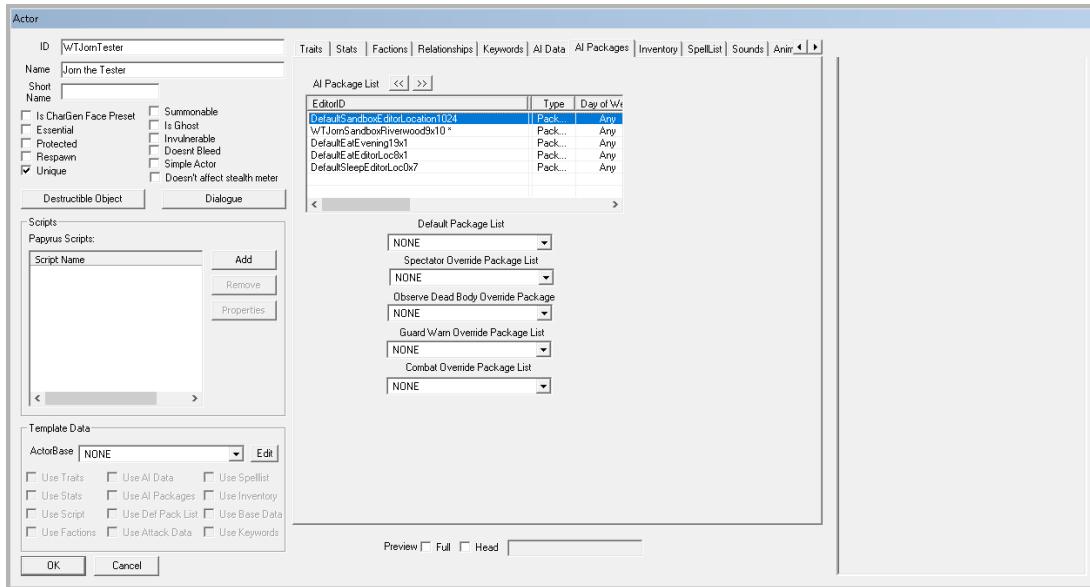


Figure 485 - AI Packages tab with five packages set up.

Click on DefaultSandboxEditorLocation1024 to highlight it, then click '>>' until it has been moved to the bottom of the packages list.

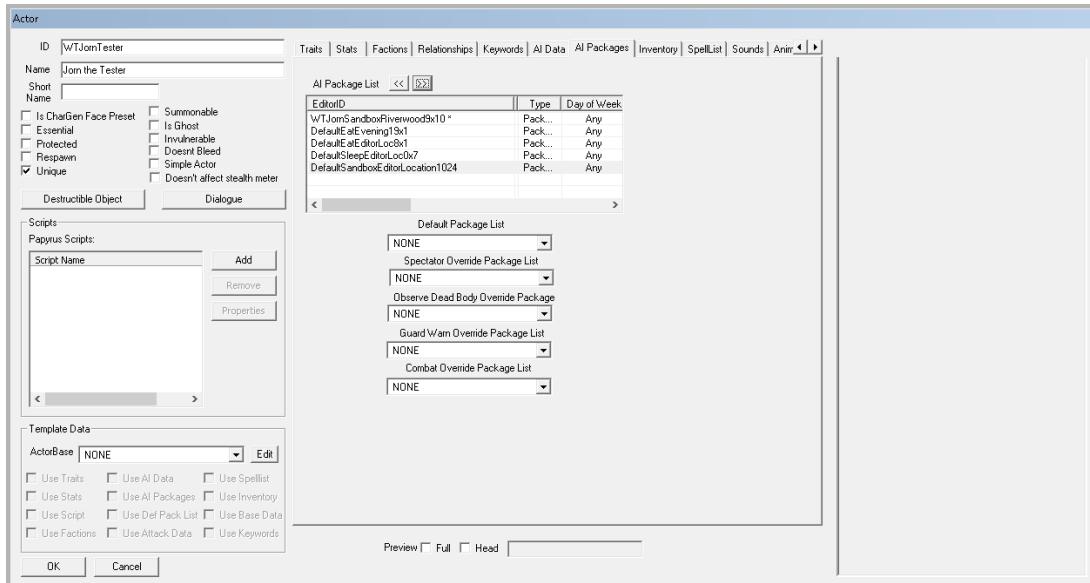


Figure 486 - DefaultSandboxEditorLocation1024 moved to the bottom of the packages list.

This will make Jorn sandbox in the Riverwood inn where we placed him in the previous section.

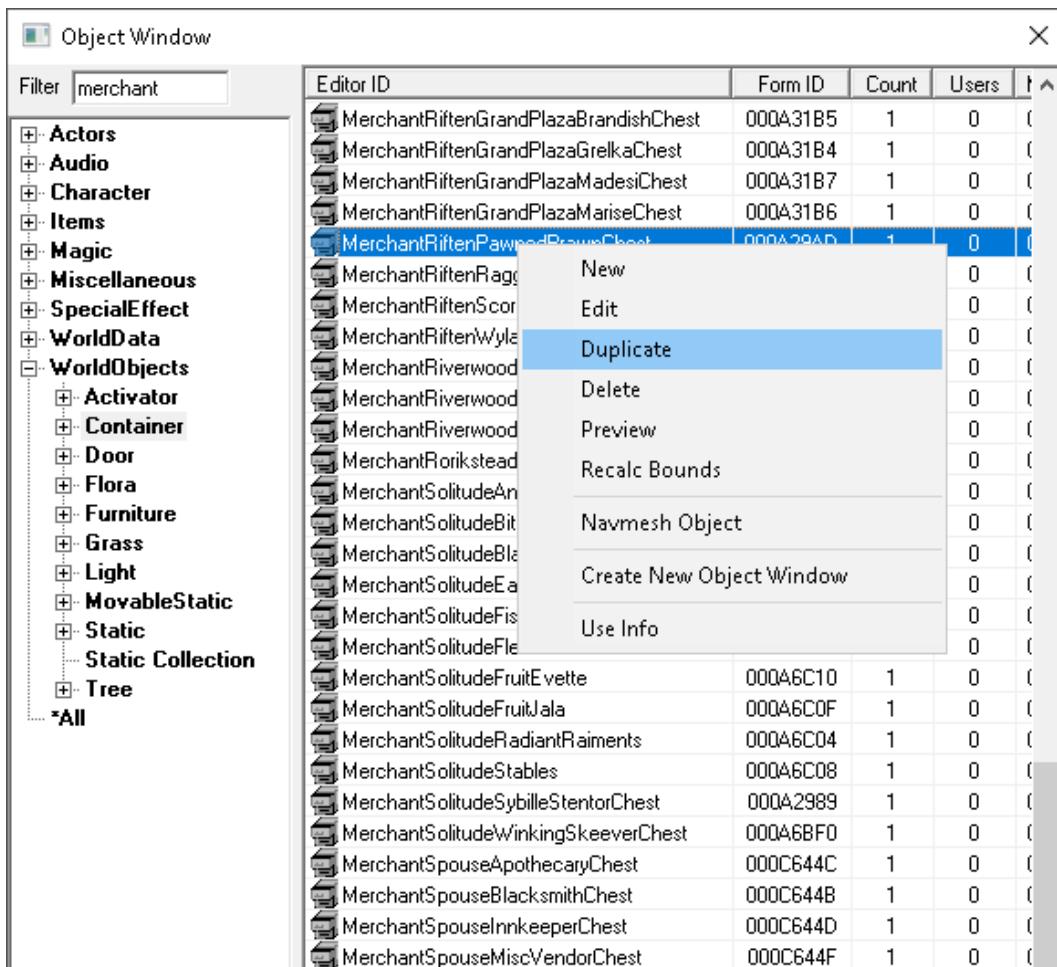
## MAKING A MERCHANT

In this section I'll be showing you how to set an NPC up as a merchant. I'll be using Jorn the Tester, the NPC I created in the previous sections, in this example.

The first thing we need to do is make the merchant container. This container is usually placed in out of reach of the player, i.e.: under floors or beneath the ground.

The easiest way to make a new merchant container is to duplicate an existing one. In the Object Window, go to WorldObjects > Container and filter by 'merchant'.

For this example, I duplicated MerchantRiftenPawnedPrawnChest by right-clicking on it and selecting Duplicate.



	Editor ID	Form ID	Count	Users	⋮
MerchantRiftenGrandPlazaBrandishChest	000A31B5	1	0	0	⋮
MerchantRiftenGrandPlazaGrelkaChest	000A31B4	1	0	0	⋮
MerchantRiftenGrandPlazaMadesiChest	000A31B7	1	0	0	⋮
MerchantRiftenGrandPlazaMariseChest	000A31B6	1	0	0	⋮
<b>MerchantRiftenPawnedPrawnChest</b>	<b>000A29AD</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>⋮</b>
MerchantRiftenRag	New		0	0	⋮
MerchantRiftenScor	Edit		0	0	⋮
MerchantRiftenWyla	Duplicate		0	0	⋮
MerchantRiverwood	Delete		0	0	⋮
MerchantRiverwood	Preview		0	0	⋮
MerchantRorikstead	Recalc Bounds		0	0	⋮
MerchantSolitudeAn	Navmesh Object		0	0	⋮
MerchantSolitudeBit	Create New Object Window		0	0	⋮
MerchantSolitudeBla	Use Info		0	0	⋮
MerchantSolitudeEa			0	0	⋮
MerchantSolitudeFis			0	0	⋮
MerchantSolitudeFle			0	0	⋮
MerchantSolitudeFruitEvette	000A6C10	1	0	0	⋮
MerchantSolitudeFruitJala	000A6C0F	1	0	0	⋮
MerchantSolitudeRadiantRaiments	000A6C04	1	0	0	⋮
MerchantSolitudeStables	000A6C08	1	0	0	⋮
MerchantSolitudeSybilleStentorChest	000A2989	1	0	0	⋮
MerchantSolitudeWinkingSkeeverChest	000A6BF0	1	0	0	⋮
MerchantSpouseApothecaryChest	000C644C	1	0	0	⋮
MerchantSpouseBlacksmithChest	000C644B	1	0	0	⋮
MerchantSpouseInnkeeperChest	000C644D	1	0	0	⋮
MerchantSpouseMiscVendorChest	000C644F	1	0	0	⋮

Figure 487 - Duplicating an existing merchant container.

Highlight the duplicate and press F2 to rename it.

Editor ID	Form ID	Count	Users	
MerchantRiftenGrandPlazaBrandishChest	000A31B5	1	0	(
MerchantRiftenGrandPlazaGrelkaChest	000A31B4	1	0	(
MerchantRiftenGrandPlazaMadesiChest	000A31B7	1	0	(
MerchantRiftenGrandPlazaMariseChest	000A31B6	1	0	(
MerchantRiftenPawnedPrawnChest	000A29AD	1	0	(
WTMerchantJornTesterChest	0200D2D7	0*	0	(
MerchantRiftenRaggedFlagonChest	000A29AE	1	0	(
MerchantRiftenScorchedHammerBlacksmith...	000A31AF	1	0	(
MerchantRiftenWylandriahsChest	000A2988	1	0	(
MerchantRiverwoodAlvorBlacksmithChest	00078C0D	1	0	(
MerchantRiverwoodSleepingGiantChest	00078C0E	1	0	(
MerchantRiverwoodTraderChest	00078C0C	1	0	(
MerchantRoriksteadFrostFruitInnChest	0009F250	1	0	(
MerchantSolitudeAngelinesAromatics	000A6C05	1	0	(
MerchantSolitudeBitsAndPieces	000A6C06	1	0	(
MerchantSolitudeBlacksmith	000A6C07	1	0	(
MerchantSolitudeEastEmpireCompany	000D6AA4	1	0	(
MerchantSolitudeFishAddvar	000A6C0E	1	0	(
MerchantSolitudeFletcher	000B2035	2	0	(
MerchantSolitudeFruitEvette	000A6C10	1	0	(
MerchantSolitudeFruitJala	000A6C0F	1	0	(
MerchantSolitudeRadianRaiments	000A6C04	1	0	(
MerchantSolitudeStables	000A6C08	1	0	(
MerchantSolitudeSybilleStentorChest	000A2989	1	0	(
MerchantSolitudeWinkingSkeeverChest	000A6BF0	1	0	(
MerchantSpouseApothecaryChest	000C644C	1	0	(
MerchantSpouseBlacksmithChest	000C644B	1	0	(
MerchantSpouseInkeeperChest	000C644D	1	0	(
MerchantSpouseMiscVendorChest	000C644F	1	0	(

Figure 488 - Renaming the duplicate container.

When prompted to create a new object, select No.



Figure 489 - Create New Object prompt.

Objects that will form the merchant's inventory will be listed in the item list. Typically these will be levelled items so the merchant's daily stock will be randomized.

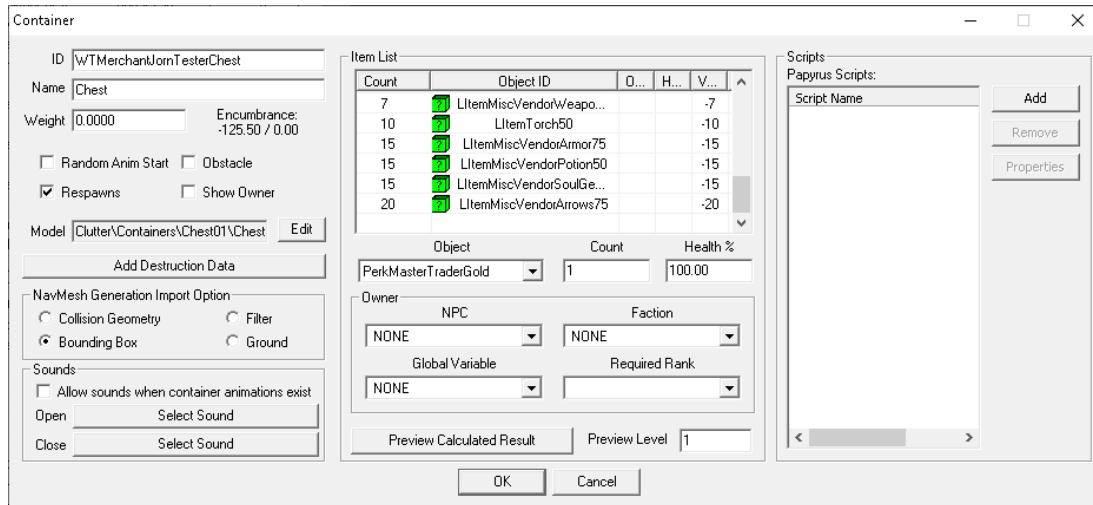


Figure 490 - Container inventory.

To remove an item from the item list, right-click on it and select Delete.

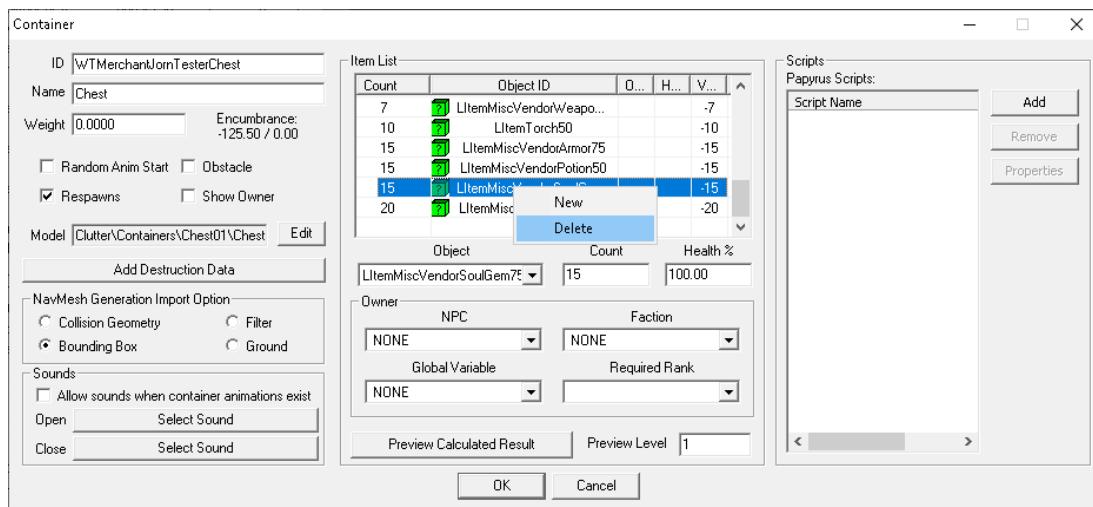


Figure 491 - Deleting an item from the item list.

To add an item to the item list, select New instead.

Once you're satisfied with the merchant's inventory, click OK to close out of the Container properties.

Drag and drop the container into the render window to add it to a cell. I added it to the RiverwoodSleepingGiantInn cell, the same cell Jorn, our NPC, was added to.

Make sure it's added below the floor so the player can't get to it.

It's not necessary to lock it or add ownership to it.

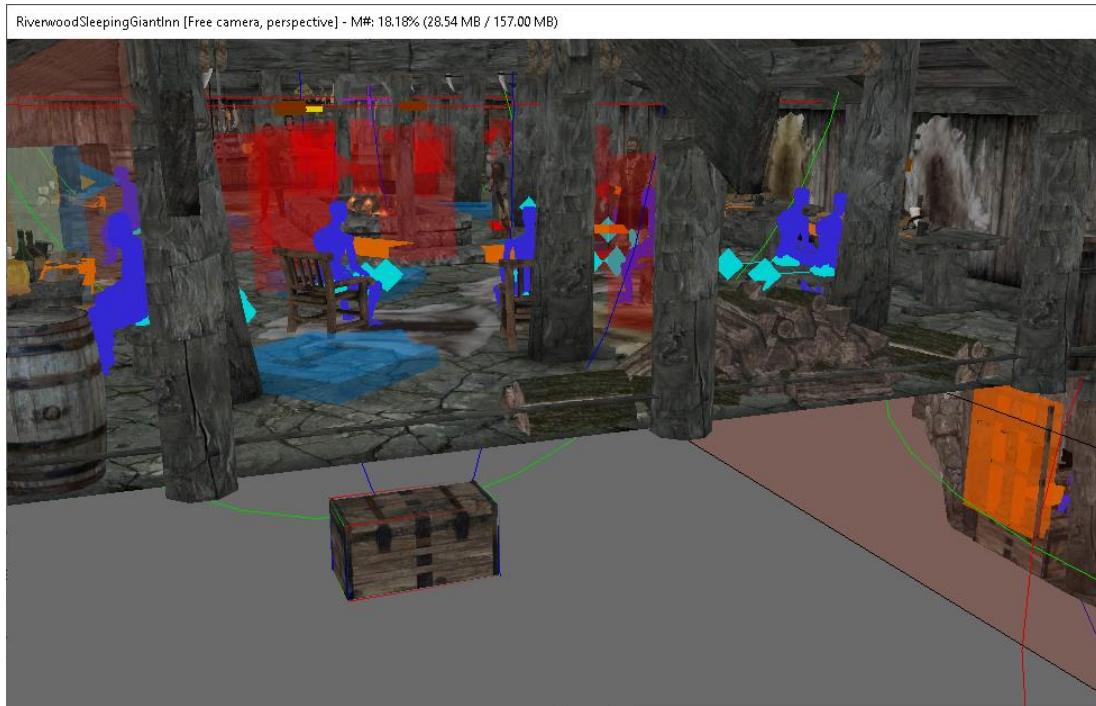


Figure 492 - Adding the container.

Next, we need to make a new faction linked to the merchant container. This will be used to determine business hours and vendor type.

In the Object Window, browse to Character > Faction and filter by ‘services’.

For this example, I’m going to duplicate ServicesRiftenPawnedPrawn.

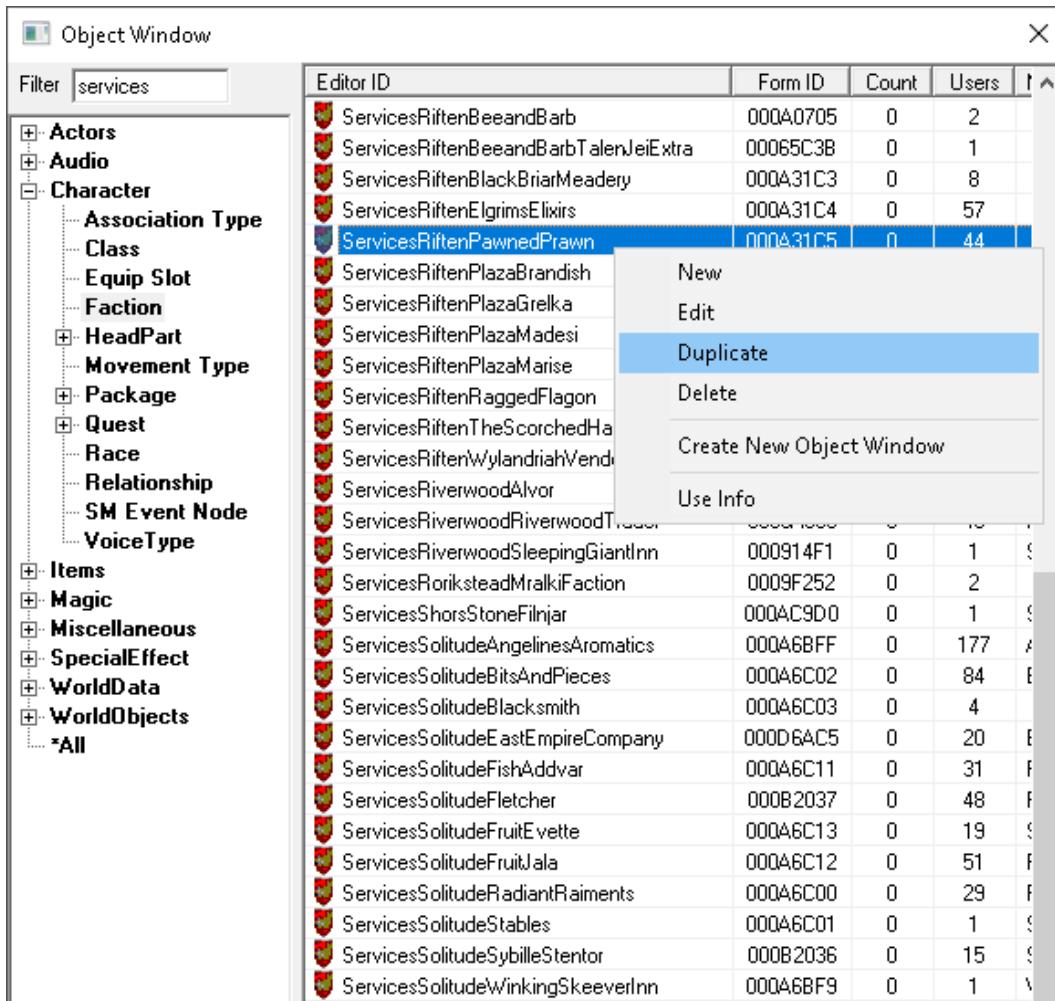


Figure 493 - Duplicating an existing faction.

Again, press F2 to rename it.

Object Window					
Editor ID	Form ID	Count	Users		
ServicesRiftenBeeandBarb	000A0705	0	2		
ServicesRiftenBeeandBarbTalenJeiExtra	00065C3B	0	1		
ServicesRiftenBlackBriarMeadery	000A31C3	0	8		
ServicesRiftenElgrimsElixirs	000A31C4	0	57		
ServicesRiftenPawnedPrawn	000A31C5	0	44		
WTServicesJornTester	0200D2D8	0*	0		
ServicesRiftenPlazaBrandish	000A31C7	0	1		
ServicesRiftenPlazaGrelka	000A31C9	0	8		
ServicesRiftenPlazaMadesi	000A31C8	0	1		
ServicesRiftenPlazaMarise	000A31CA	0	1		
ServicesRiftenRaggedFlagon	000A31C6	0	2		
ServicesRiftenTheScorchedHammer	000A31C2	0	2	F	
ServicesRiftenWylndriahVendor	000AC9CD	0	25	F	
ServicesRiverwoodAlvor	0005A666	0	20	A	
ServicesRiverwoodRiverwoodTrader	0005A665	0	43	F	
ServicesRiverwoodSleepingGiantInn	000914F1	0	1	S	
ServicesRoriksteadMralkiFaction	0009F252	0	2		
ServicesShorsStoneFiljar	000AC9D0	0	1	S	
ServicesSolitudeAngelinesAromatics	000A6BFF	0	177	A	
ServicesSolitudeBitsAndPieces	000A6C02	0	84	E	
ServicesSolitudeBlacksmith	000A6C03	0	4		
ServicesSolitudeEastEmpireCompany	000D6AC5	0	20	E	
ServicesSolitudeFishAddvar	000A6C11	0	31	F	
ServicesSolitudeFletcher	000B2037	0	48	F	
ServicesSolitudeFruitEvette	000A6C13	0	19	S	
ServicesSolitudeFruitJala	000A6C12	0	51	F	
ServicesSolitudeRadiantRaiments	000A6C00	0	29	F	
ServicesSolitudeStables	000A6C01	0	1	S	
ServicesSolitudeSybilleStentor	000B2036	0	15	S	
ServicesSolitudeWinkingSkeeverInn	000A6BF9	0	1	V	

Figure 494 - Renaming the duplicate faction.

When prompted to create a new object, select No.



Figure 495 - Create New Object prompt.

Double-click or right-click on the faction and select Edit to open its properties.

Jorn, our sample NPC, returns to the Riverwood inn at 7:00 PM every evening, so let's have him run his little side business for 5 hours until he goes to sleep. I set the start hour for his shop to 19, ending at midnight.

**Note:** Normal business hours for most shops are 8 - 20.

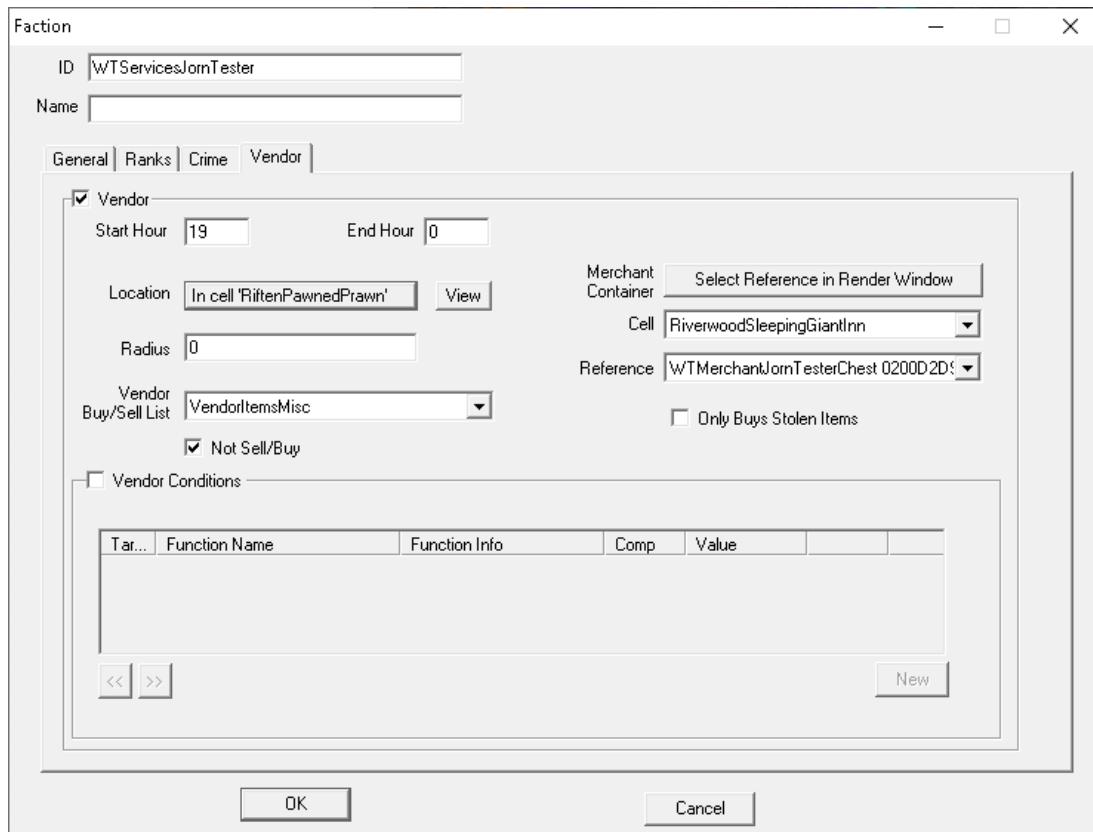


Figure 496 - Fraction properties.

Click on the Merchant Container button and select the vendor chest you placed.

Lastly, click on the Location button.

Set it to RiverwoodSleepingGiantInn.

This means Jorn will only have things to buy and sell when he makes it back to the Riverwood inn.

Alternatively, if you set it to 'Near Self' instead, you'll be allowed to trade with Jorn as soon as the clock hits 7:00 PM regardless of where he is.

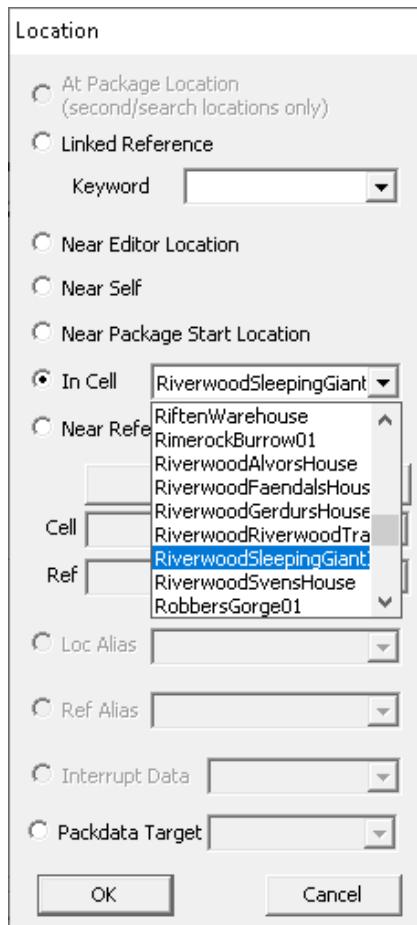


Figure 497 - Setting the vendor location.

Set the Radius field to 4096 so Jorn we'll be able to trade with Jorn no matter where he is in the the RiverwoodSleepingGiantInn cell.

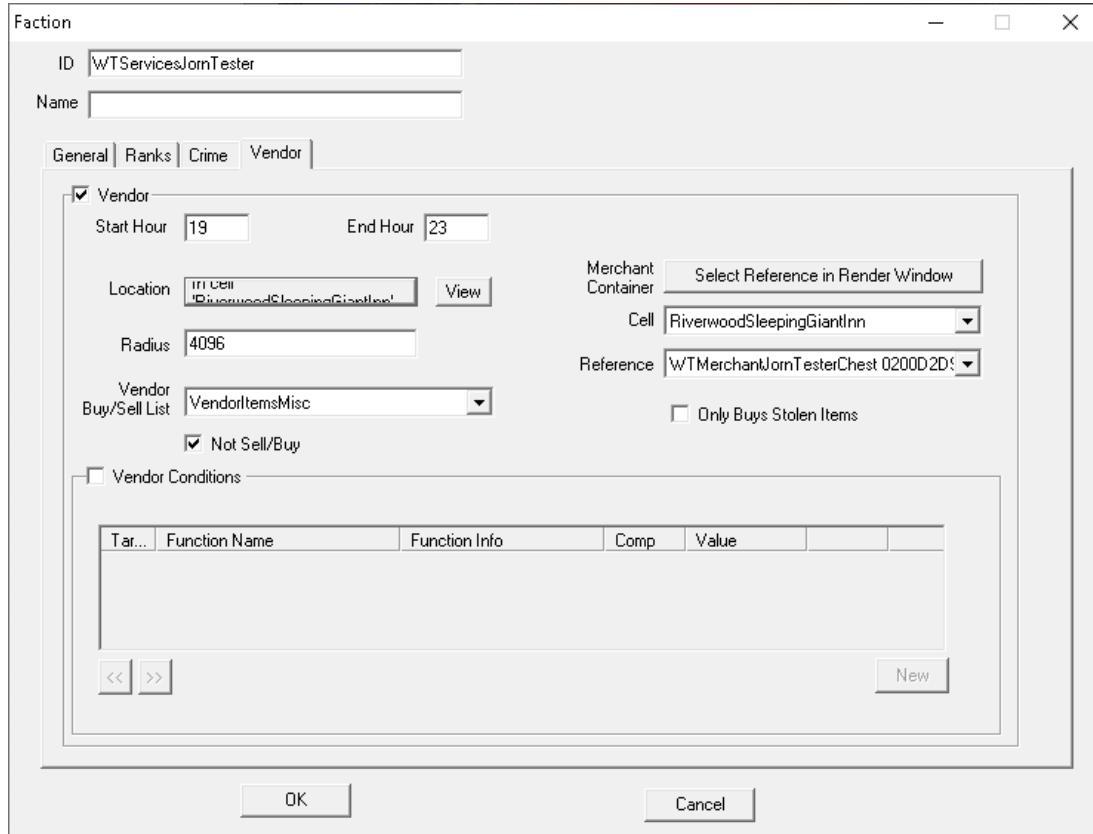


Figure 498 - Services faction set up.

Click OK to close out of Faction properties.

In the Object Window, go to Actors > Actor > Actor.

Double-click or right-click on our test NPC WTIJornTester and select Edit.

Go to the Factions tab.

Right-click in the factions list and select New.

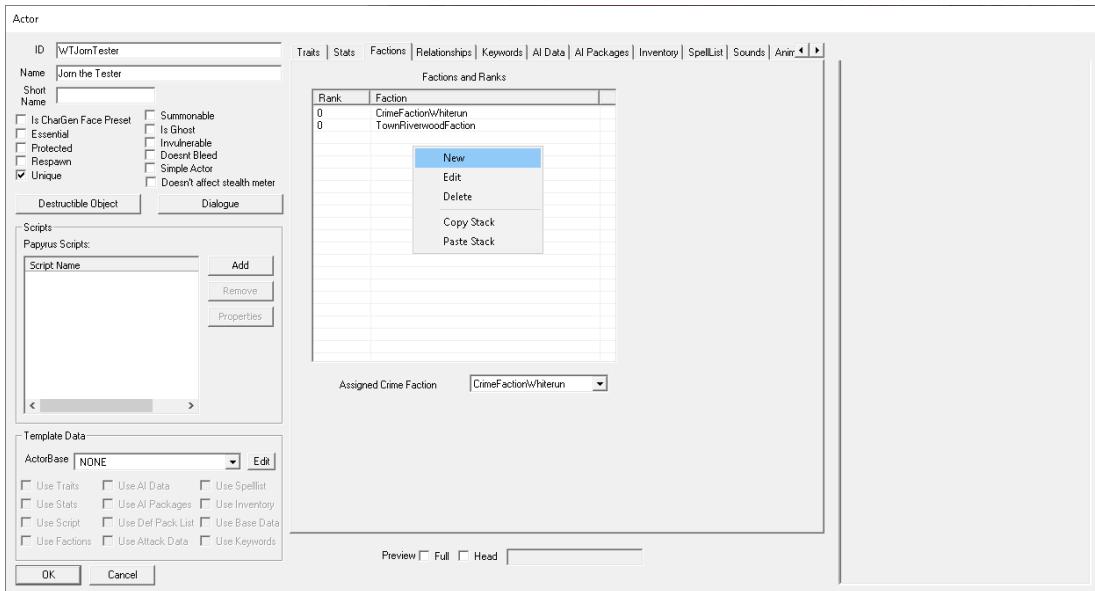


Figure 499 - Adding a new faction.

Select the services faction we just set up and click OK.

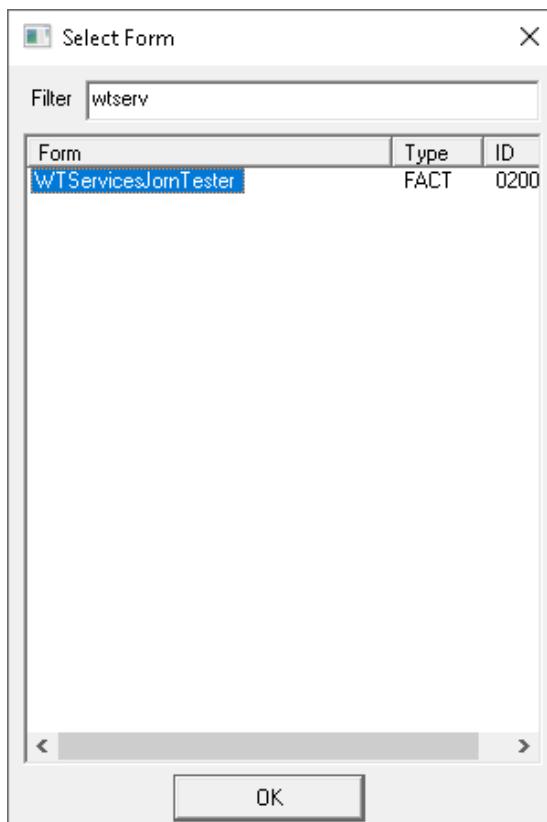


Figure 500 - Jorn's services faction highlighted.

We need to add Jorn to one more faction, so he has the dialogue that allows the player to trade with him.

Right-click in the factions list and select New.

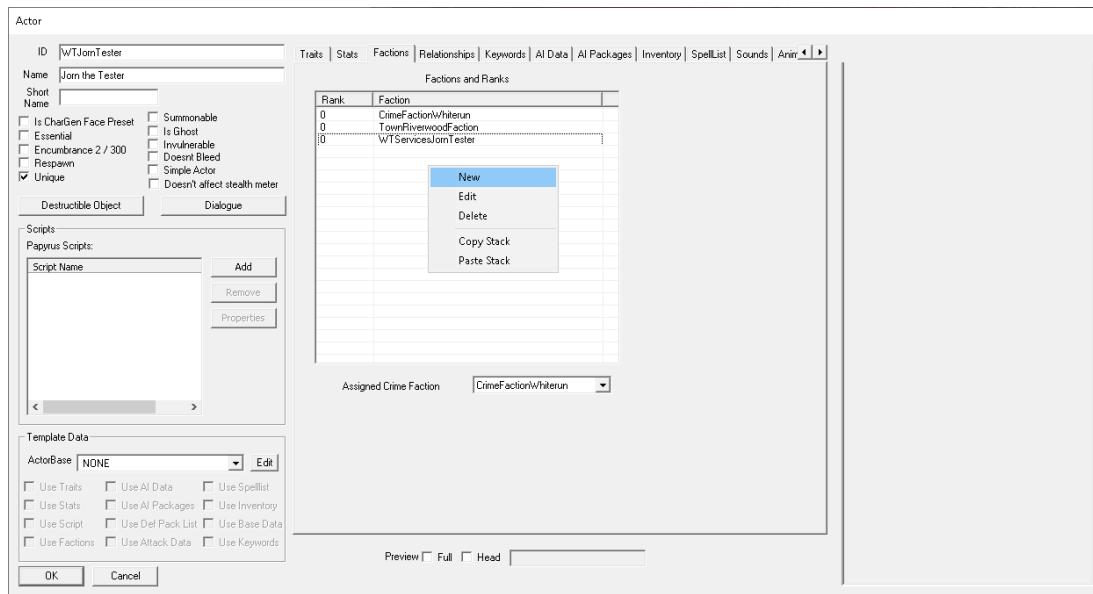


Figure 501 - Jorn added to his service faction.

Filter by ‘jobmerchant’, click on JobMerchantFaction to highlight it then click OK.

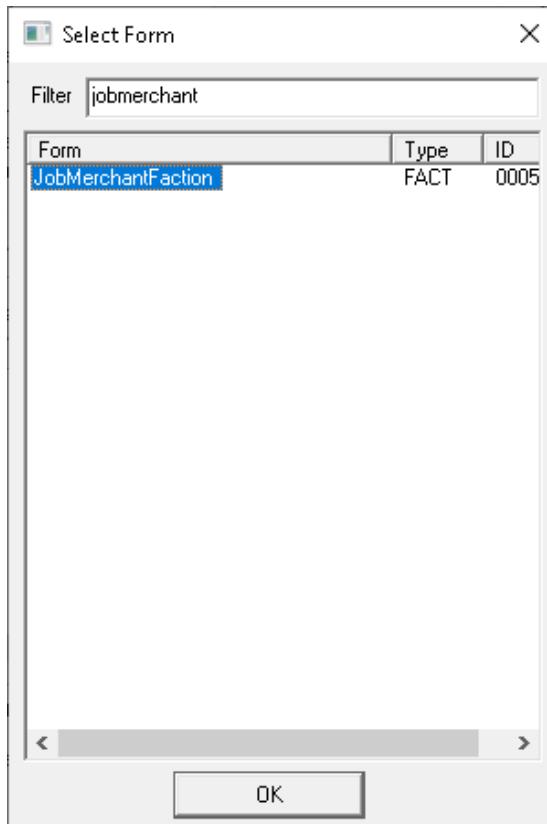


Figure 502 - JobMerchantFaction selected.

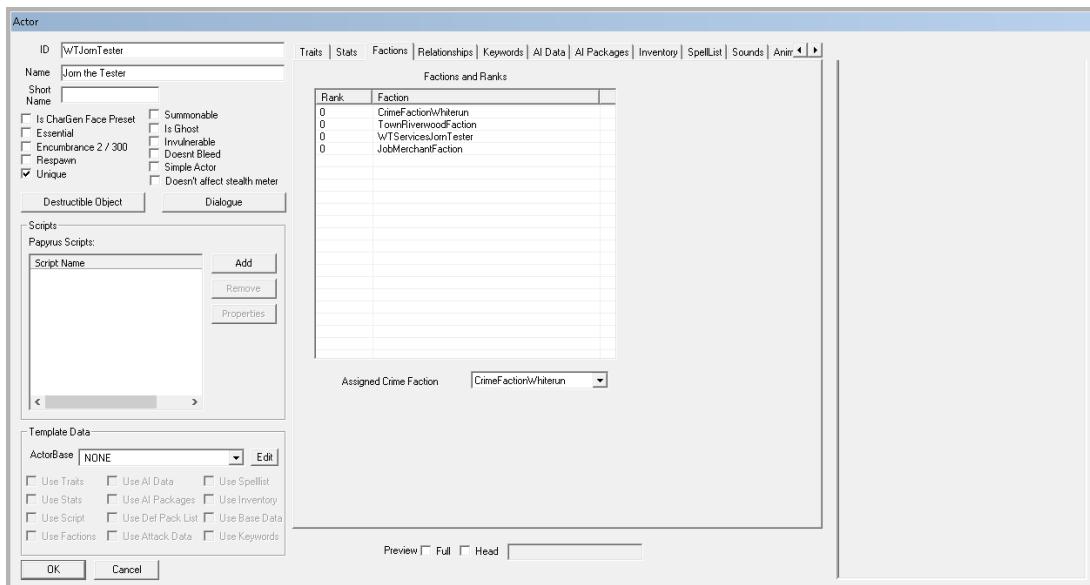


Figure 503 - Jorn added to the JobMerchantFaction.

If we go in-game and speak to Jorn, we should now be able to trade with him after 7:00 PM.



Figure 504 - Jorn with vendor dialogue during his business hours.



Figure 505 - Vendor inventory.

If your NPC uses custom voice acting, you can bring up the barter screen on a line of dialogue using the following papyrus:

```
akSpeaker.ShowBarterMenu()
```

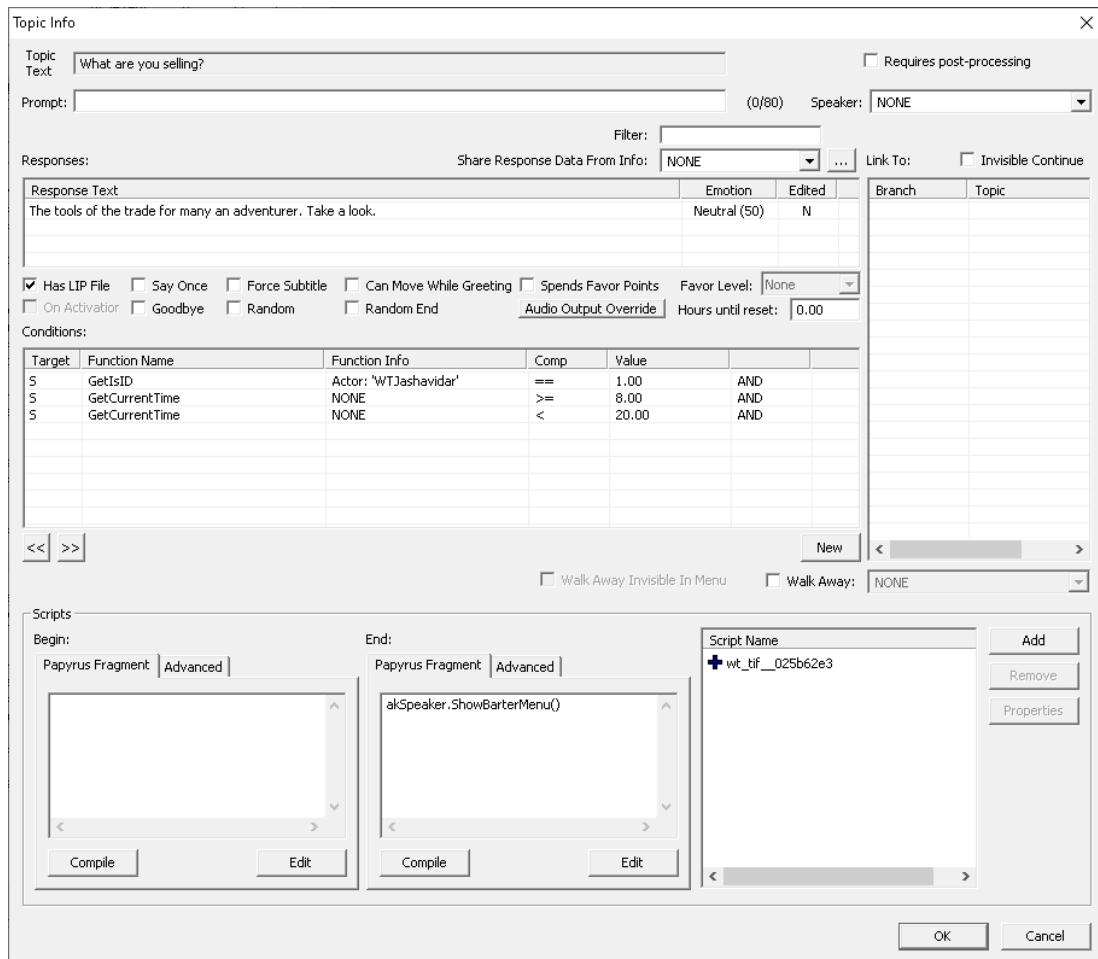


Figure 506 - Custom merchant dialogue.

Just make sure to add GetCurrentTime conditions to match the business hours set up in the service faction so this dialogue option doesn't appear outside of business hours.

For more information setting up quest dialogue, see the section [Adding dialogue to a quest](#).

## MAKING AN INNKEEPER

In this section I'll be covering the process of turning an NPC into an innkeeper that you can rent a bed from using the existing innkeeper system from the base game.

I'll be using the NPC we created in the previous section for this example.

The first thing we need to do is add our NPC to the JobRentRoomFaction faction.

In the Object Window, go to Actors > Actor > Actor and double-click or right-click on the NPC and select Edit.

Go to the Factions tab, right-click in the factions list and select New.

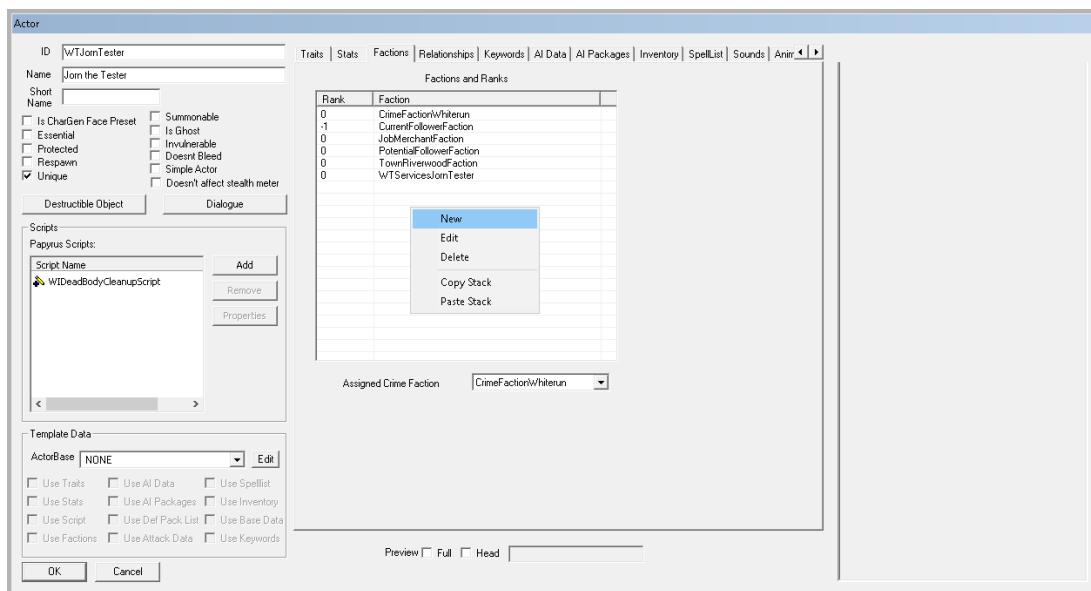


Figure 507 - Adding a new faction to Jorn.

Filter by ‘rentroom’, click on JobRentRoomFacton to highlight it then click OK.

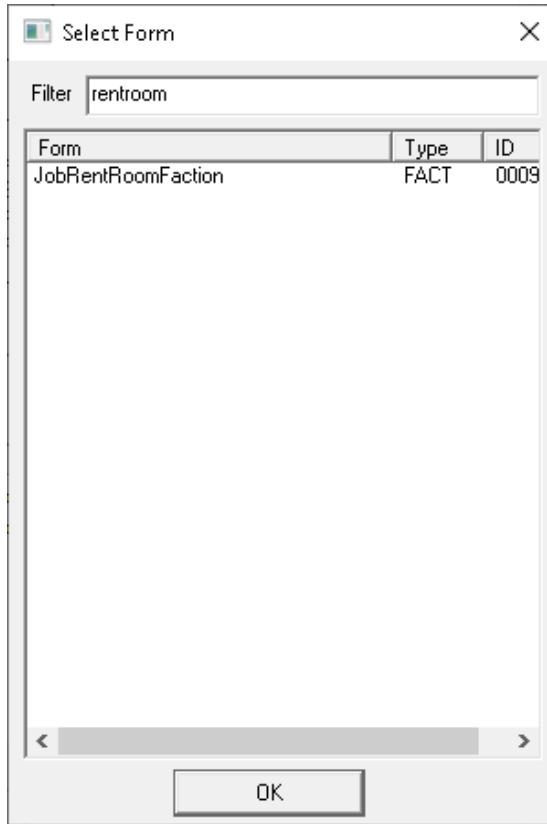


Figure 508 - Selecting the JobRentRoomFacton action.

Next, we need to add the RentRoomScript script to the NPC. To do this, click on the Add button in the Papyrus Scripts section.

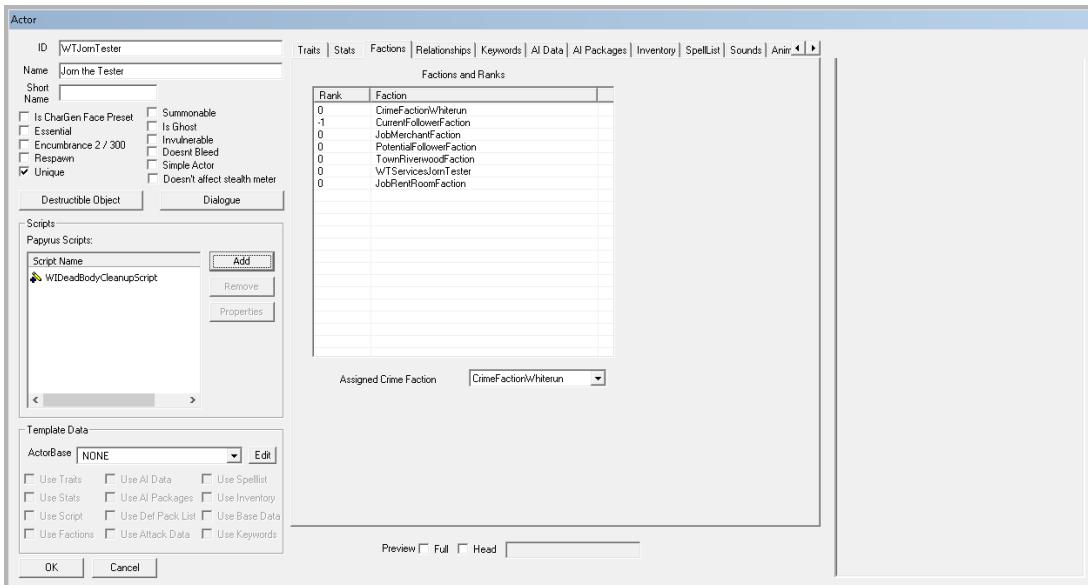


Figure 509 - Adding a new papyrus script.

Filter by 'rentroom', click on RentRoomScript to highlight it then click OK.

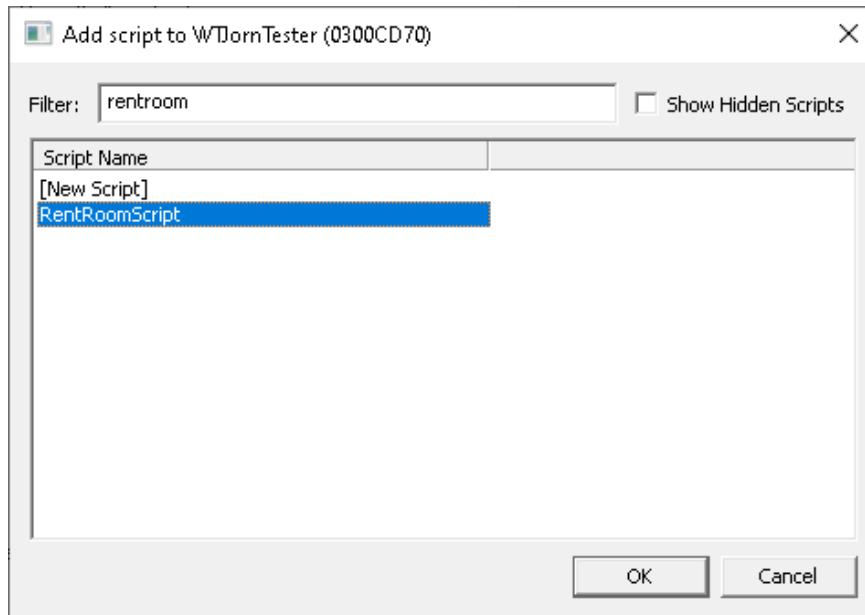


Figure 510 - Selecting the RentRoomScript script.

Click on the RentRoomScript script in the Papyrus Scripts section to highlight it then click on the Properties button.

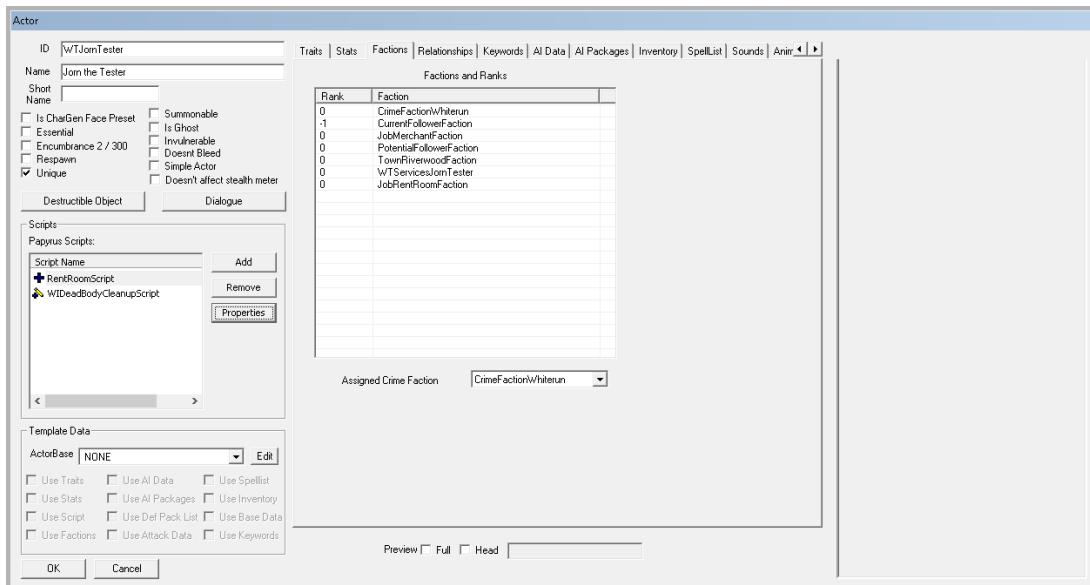


Figure 511 - Opening RentRoomScript script properties.

In the properties list, click on Bed to highlight it then click on the Edit Value button to the right.

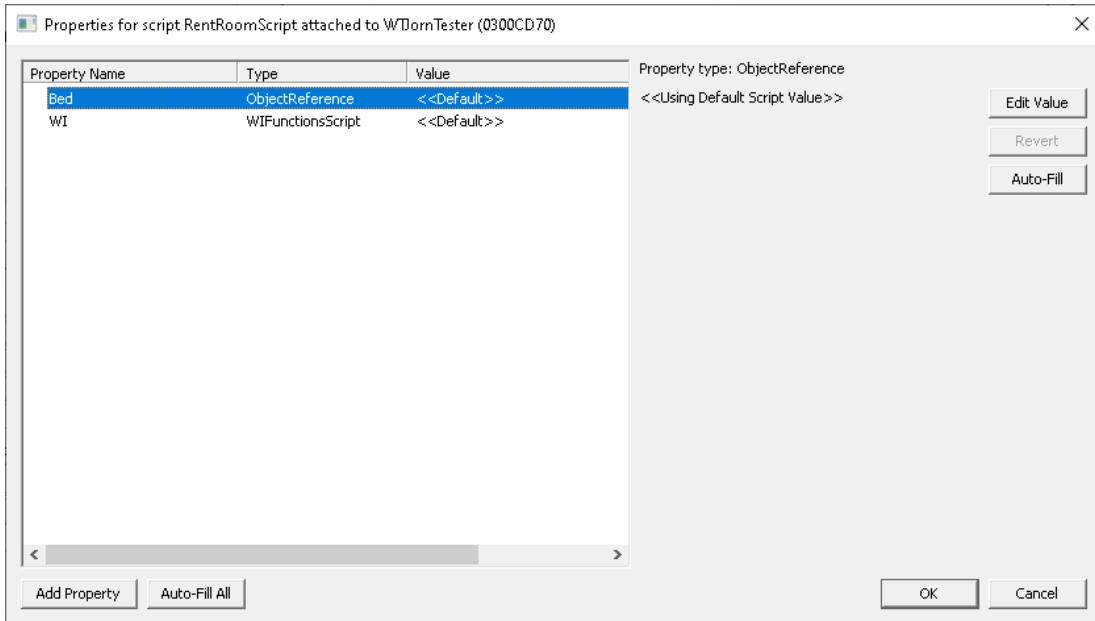


Figure 512 - Changing Bed properties.

Click on the 'Pick Reference in Render Window' button and select the bed in the render window that you want this NPC to rent out. This is the bed that the player will be allowed to sleep in after paying for a room.

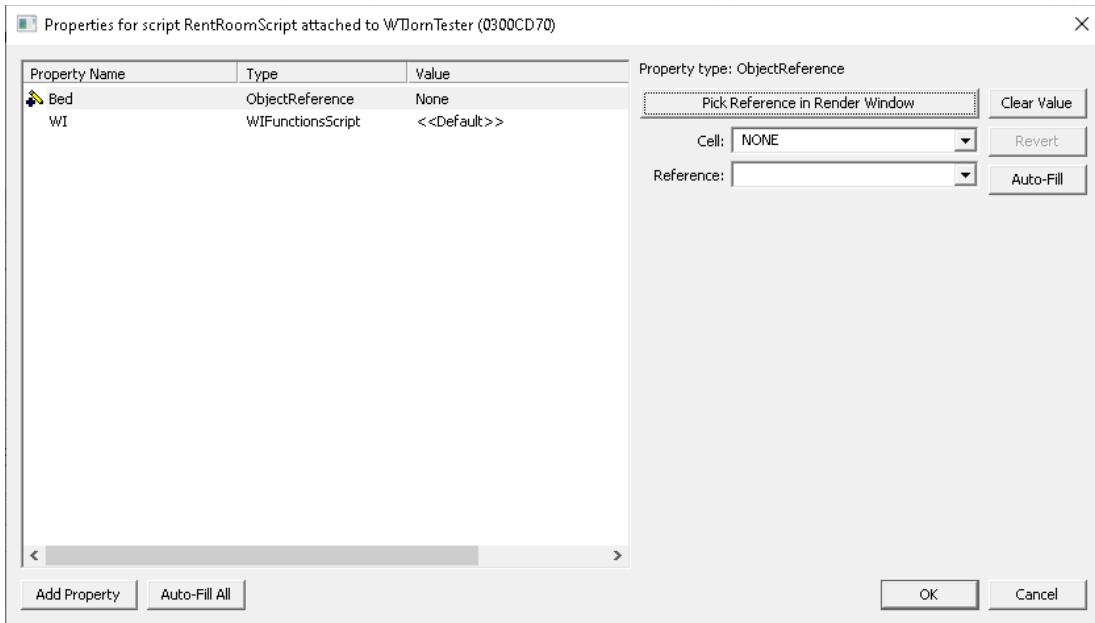


Figure 513 - Selecting a bed to rent out.

Click on the Auto-Fill All button to automatically add a value to the WI property.

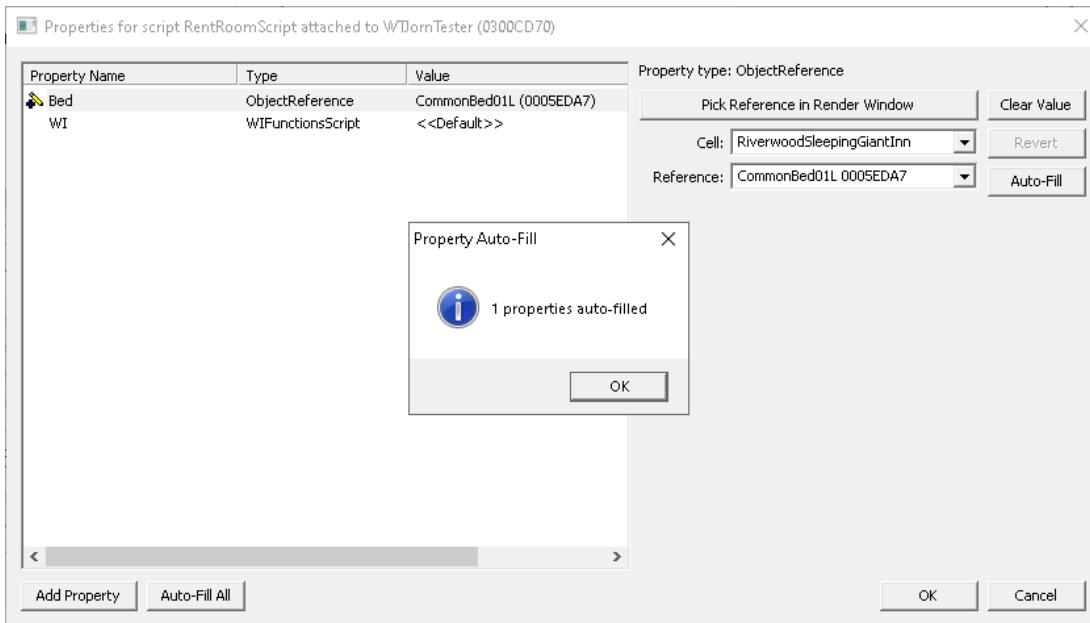


Figure 514 - Automatically adding a value to the WI property.

Click OK to close out of script properties.

Click OK to close out of actor properties.

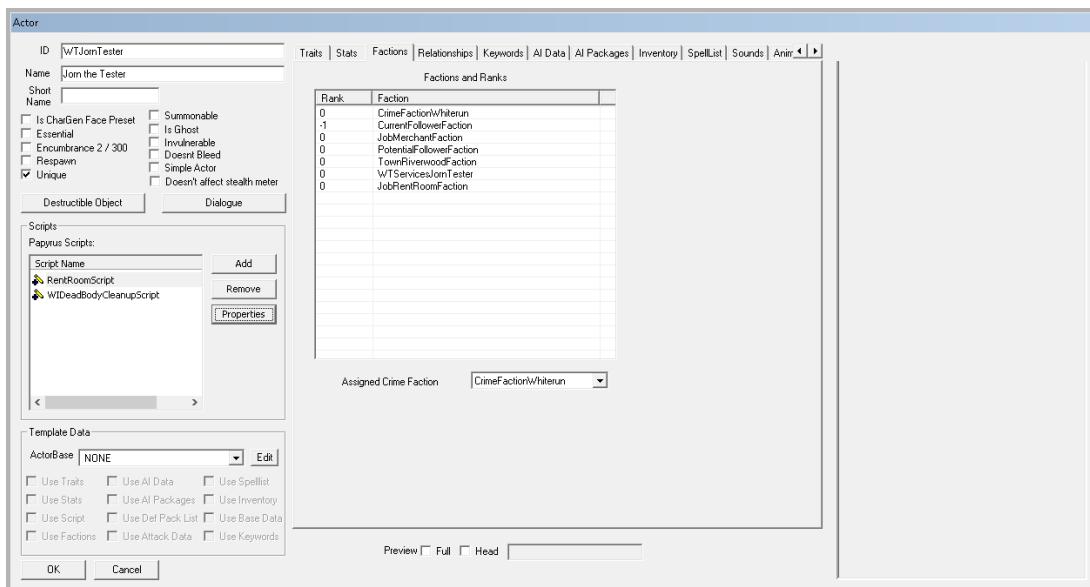


Figure 515 - Our NPC set up as an innkeeper.

If we speak to our NPC in-game, we should now be able to rent a room from them.



Figure 516 - Renting a room at the Sleeping Giant Inn from Jorn the Tester.

Jorn will also walk us over to the bed we rented.



Figure 517 - Jorn showing us to our bed.

If you're using a custom voice acted NPC, you'll need to manually remove the player's gold from their inventory and run a scene to make the NPC walk to the bed that the player has rented.

The example below is from Sigur, the innkeeper of The Hermit from Wyrmsooth.

```
game.GetPlayer().RemoveItem(GoldBase, 10)
WTInnkeeperWalkToScene.Start()
```

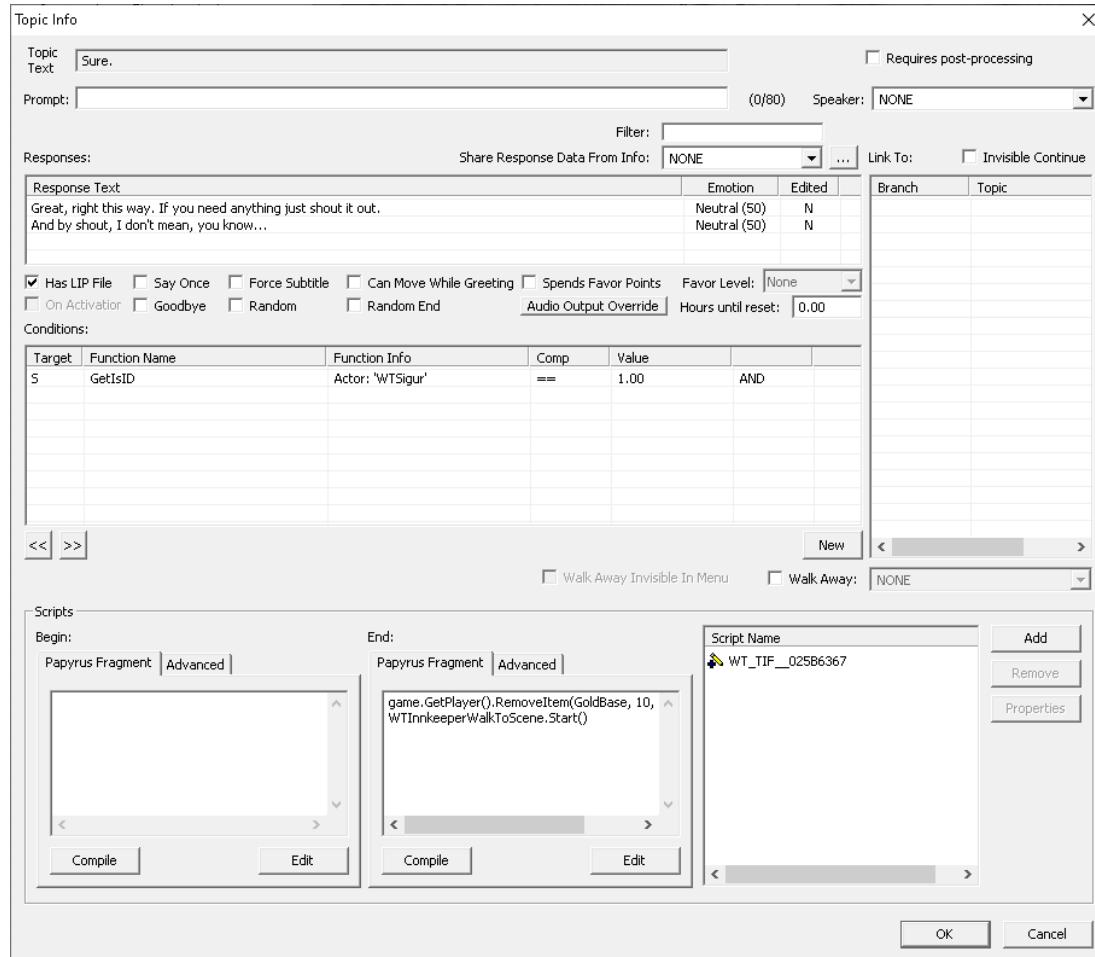


Figure 518 - Innkeeper with custom voice acted dialogue.

The script properties on the papyrus fragment:

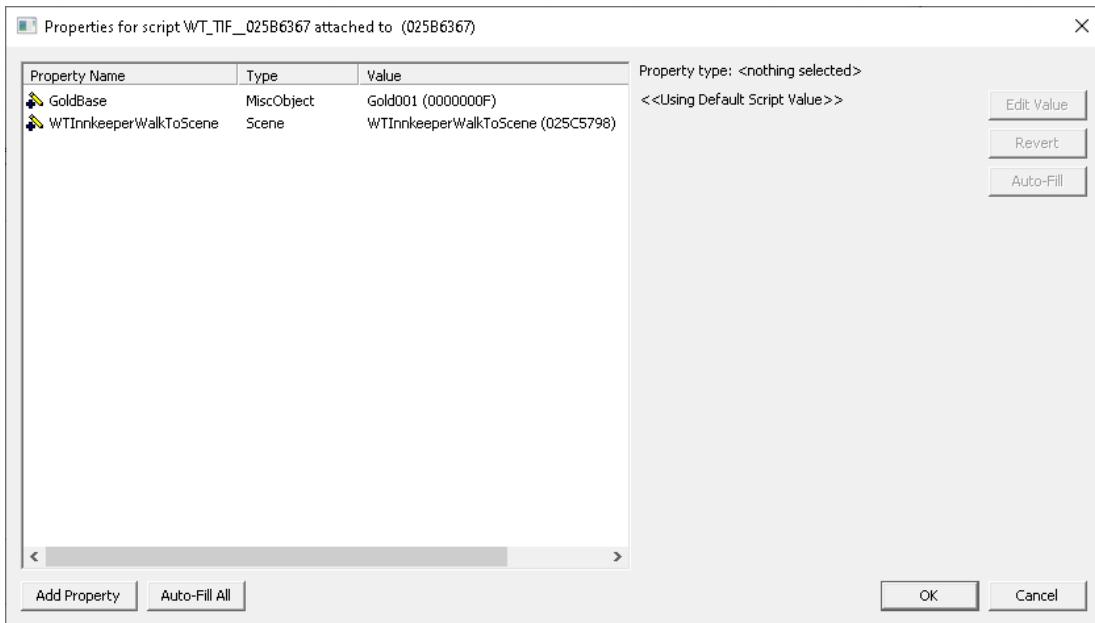


Figure 519 - Papyrus fragment script properties.

The WTInnkeeperWalkToScene scene basically just walks Sigur over to the bed in Phase 1, then back to the bar in Phase 2.

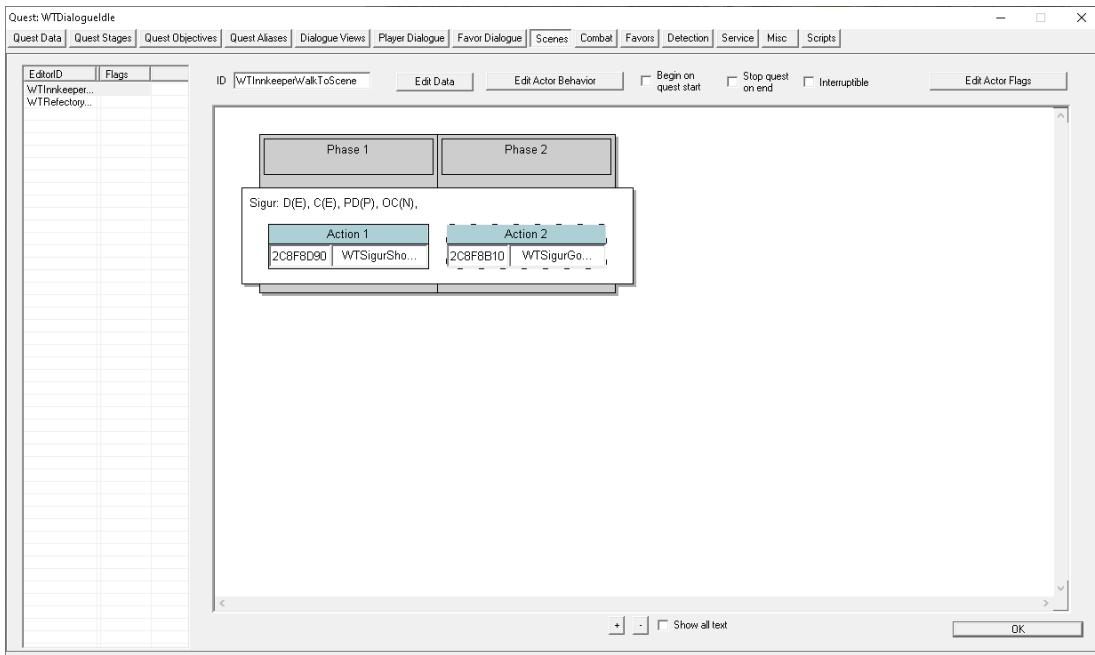


Figure 520 - WTInnkeeperWalkToScene scene set up.

For more information on how to set up scenes, see the section on [Adding scenes](#).

For more information setting up quest dialogue, see the section [Adding dialogue to a quest](#).

## MAKING A BARD

This section will cover setting an NPC up as a bard. Like in the previous sections, I'll be using the Jorn the Tester NPC for this example. Maybe he's found a new passion and decided to pursue the bardic arts.

The first thing we need to do is add our NPC to the bard factions.

In the Object Window, go to Actors > Actor > Actor, double-click or right-click on the NPC and select Edit.

Go to the Factions tab, right-click in the factions list and select New.

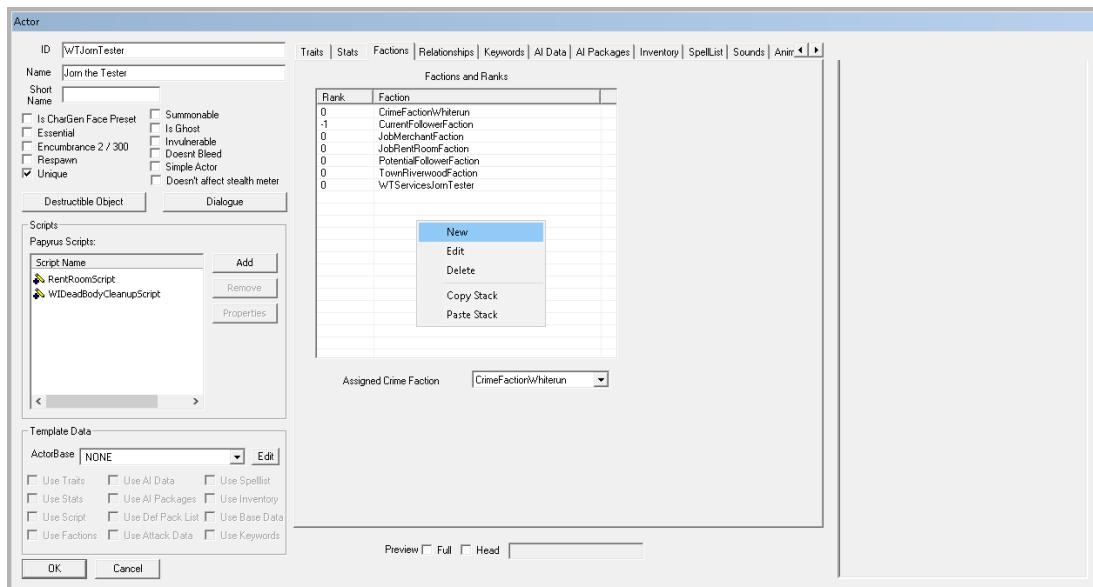


Figure 521 - Adding the first bard faction.

Filter by ‘jobbard’, click on JobBardFaction to highlight it then click OK.

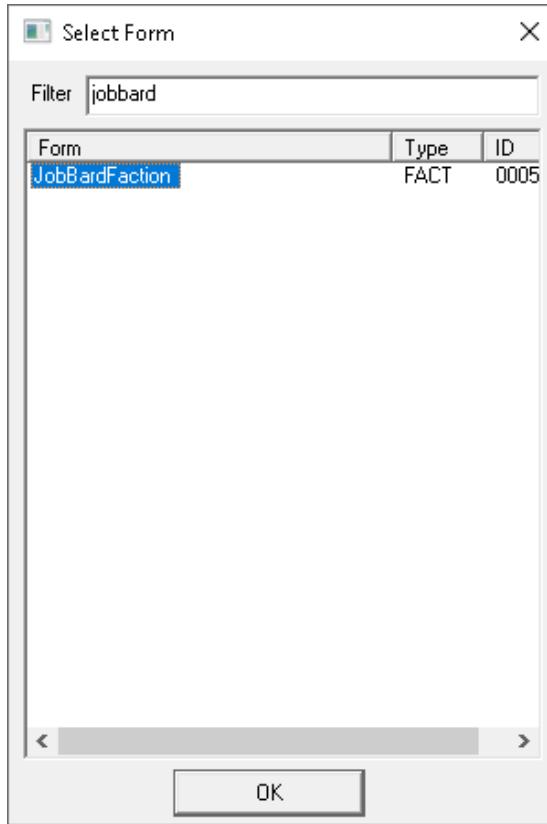


Figure 522 - Selecting the JobBardFaction faction.

Right-click in the faction list again and select New.

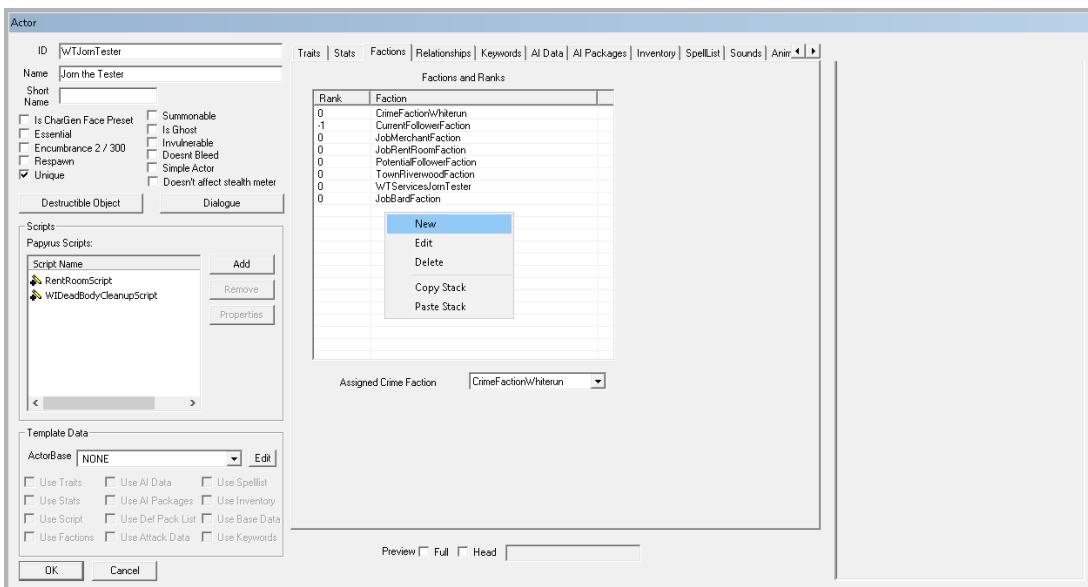


Figure 523 - Adding the second bard faction.

Filter by 'bardsinger', click on BardSingerFaction to highlight it then click OK. If you want your bard to only provide instrumental performances, select BardSingerInstrumentalOnlyFaction instead.

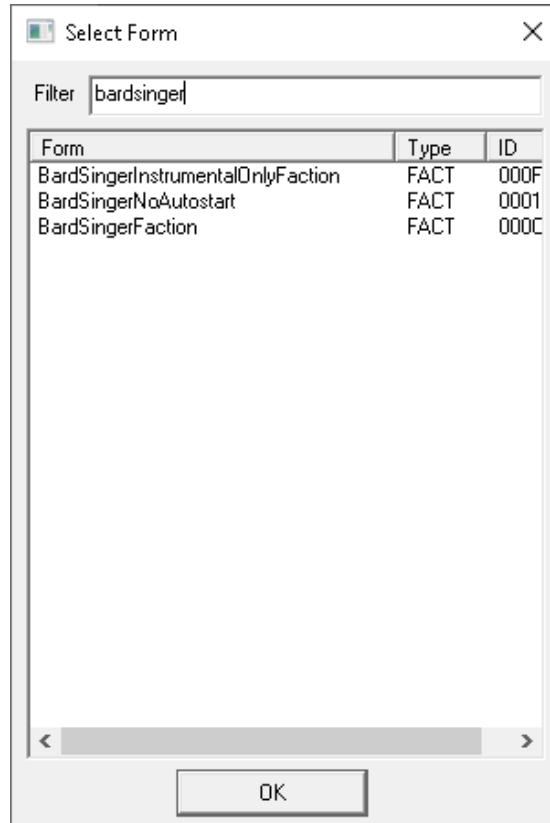


Figure 524 - Bard singer factions.

Our NPC should now be in the JobBardFaction and BardSingerFaction factions.

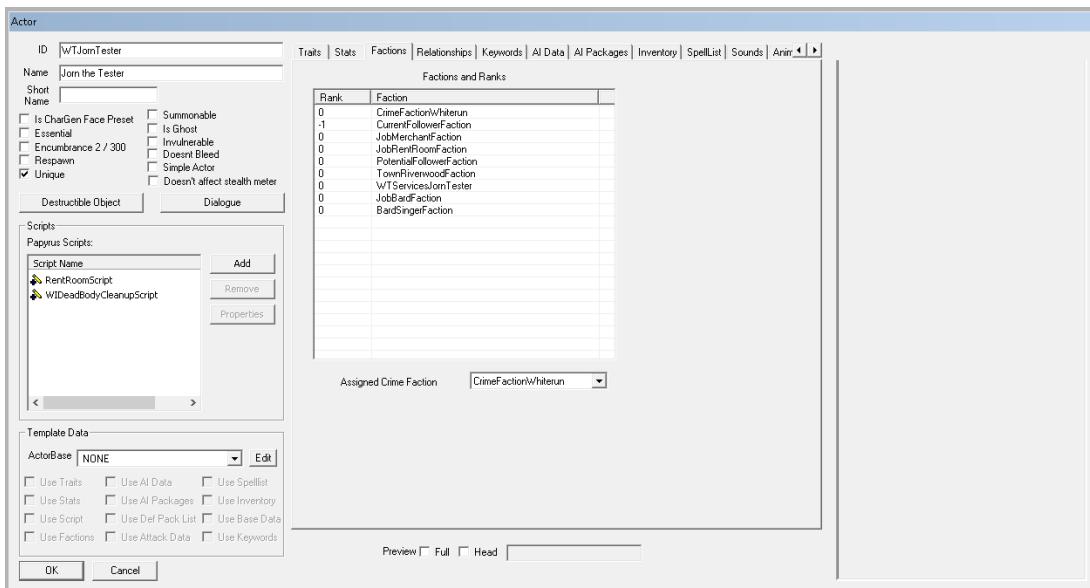


Figure 525 - JobBardFaction and BardSingerFaction factions added.

Click OK to close out of Actor properties.

Double-click or right-click on the NPC in the render window and select Edit.

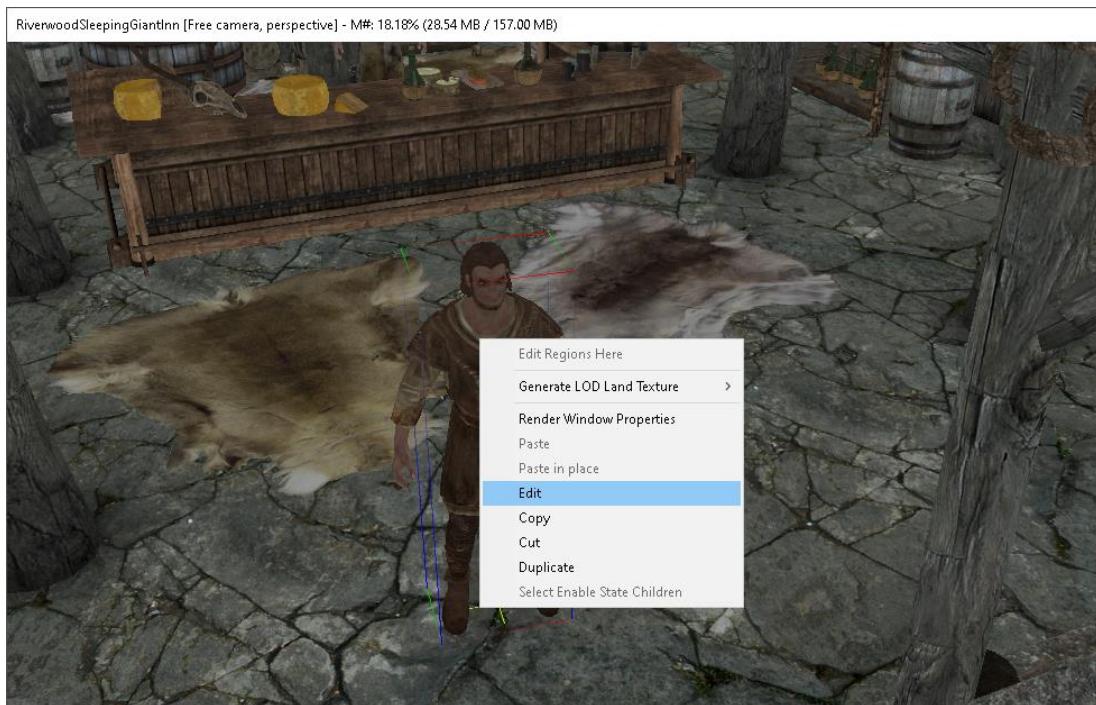


Figure 526 - Opening the properties of the NPC reference.

Go to the Linked Ref tab, right-click in the references list and select New.

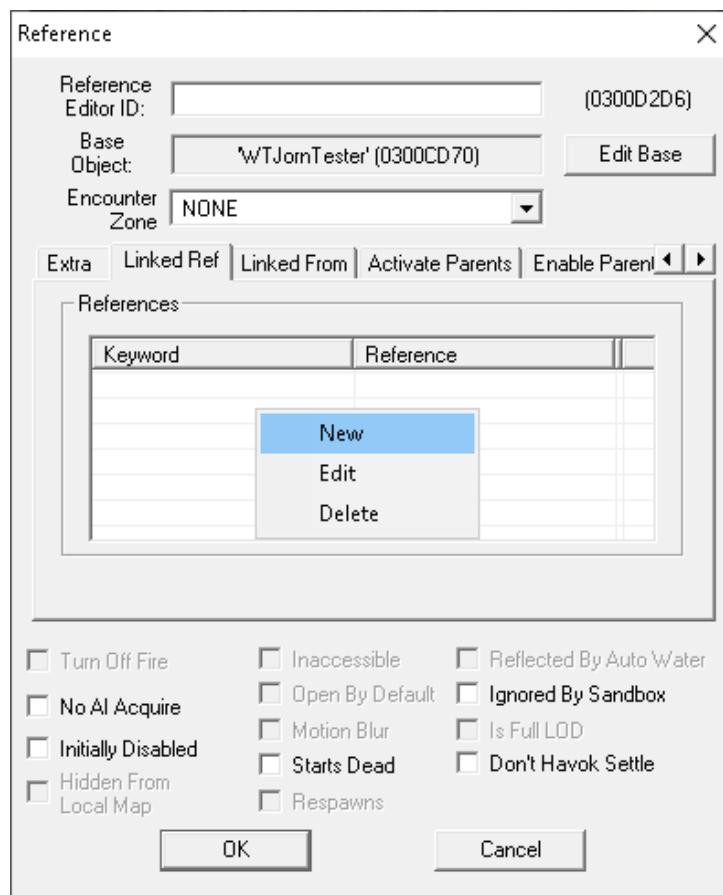
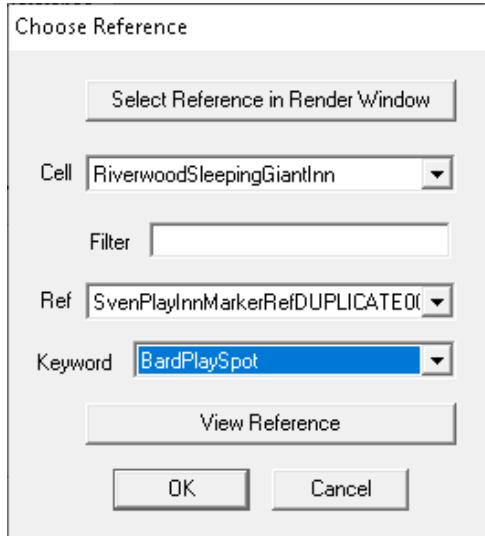


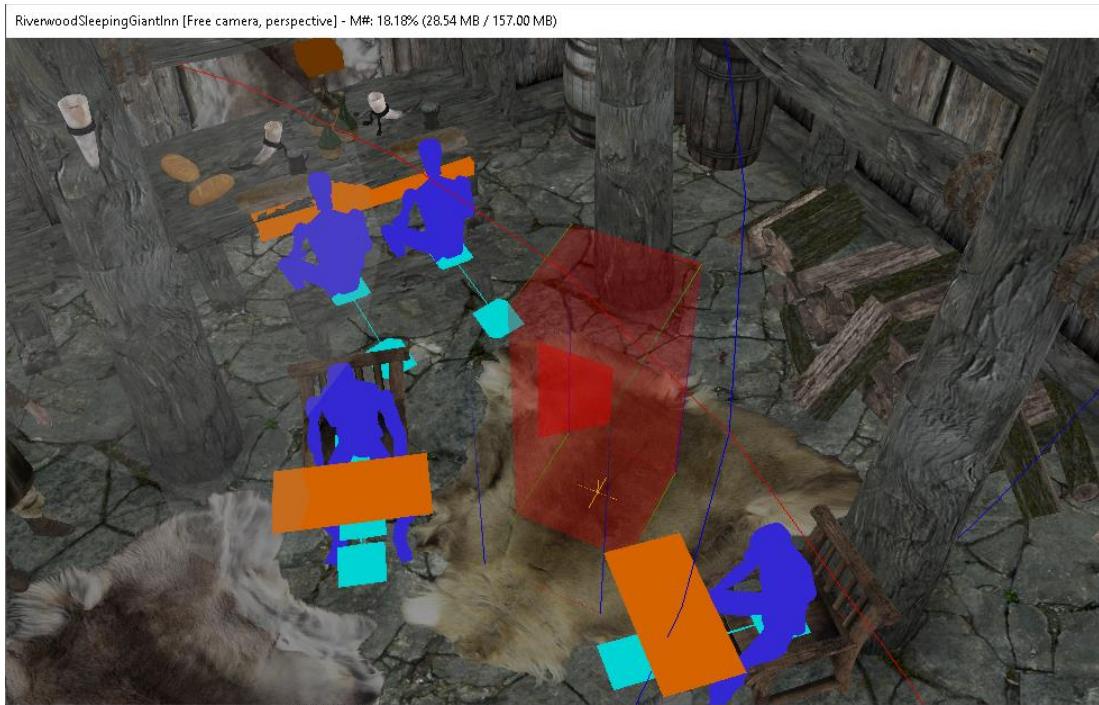
Figure 527 - Adding a new linked reference.

Click on the ‘Select Reference in Render Window’ button and select an XMarker to link the NPC to.



*Figure 528 - Selecting the linked reference.*

For this example I chose the same XMarkerHeading that Sven has been linked to.



*Figure 529 - The linked reference.*

Make sure you set the Keyword drop-down to BardPlaySpot.

Click OK to close out of Reference properties.

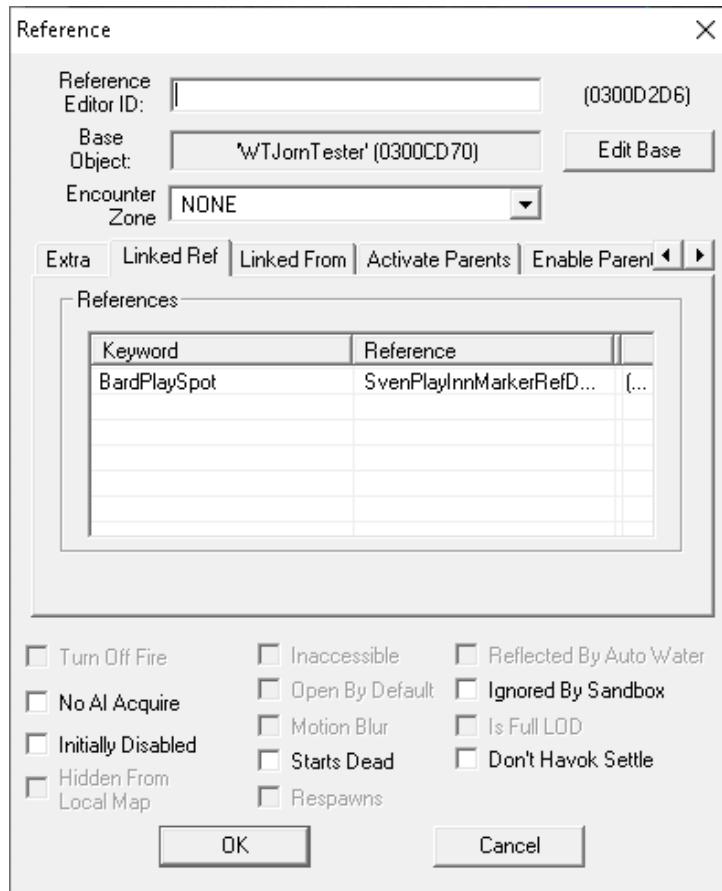


Figure 530 - NPC linked to an XMarkerHeading.

Lastly, we need to set up a package for our NPC.

In the Object Window, go back to Actors > Actor > Actor, double-click or right-click on the NPC and select Edit.

This time go to the AI Packages tab, right-click in the packages list and select New.

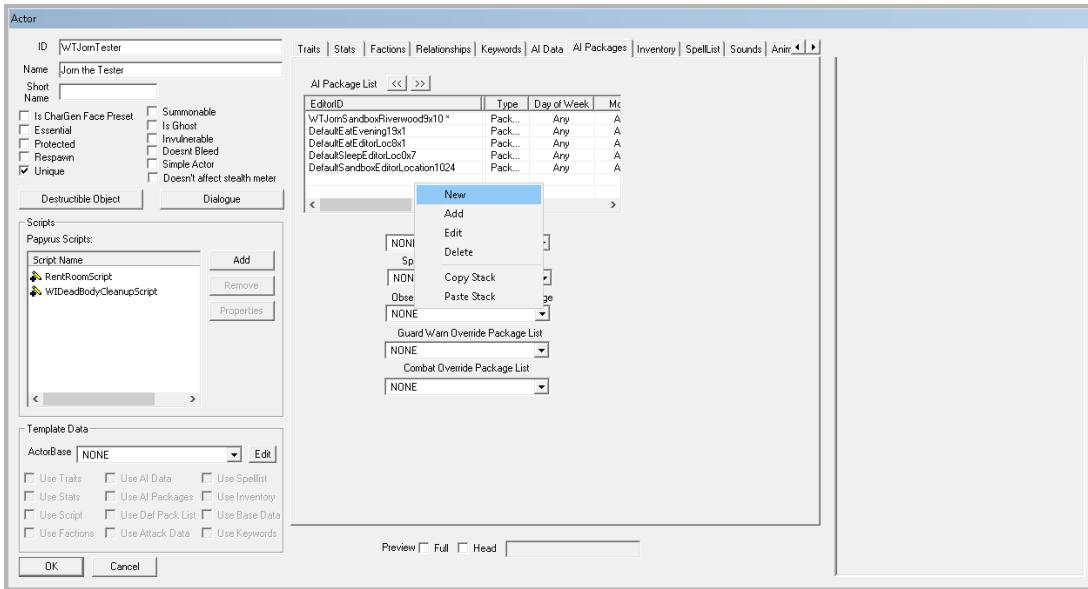


Figure 531 - Adding a new package.

Set the package ID. For this example I set it to WTJornBardPerformance9x10. Set the Package Template drop-down to Sandbox.

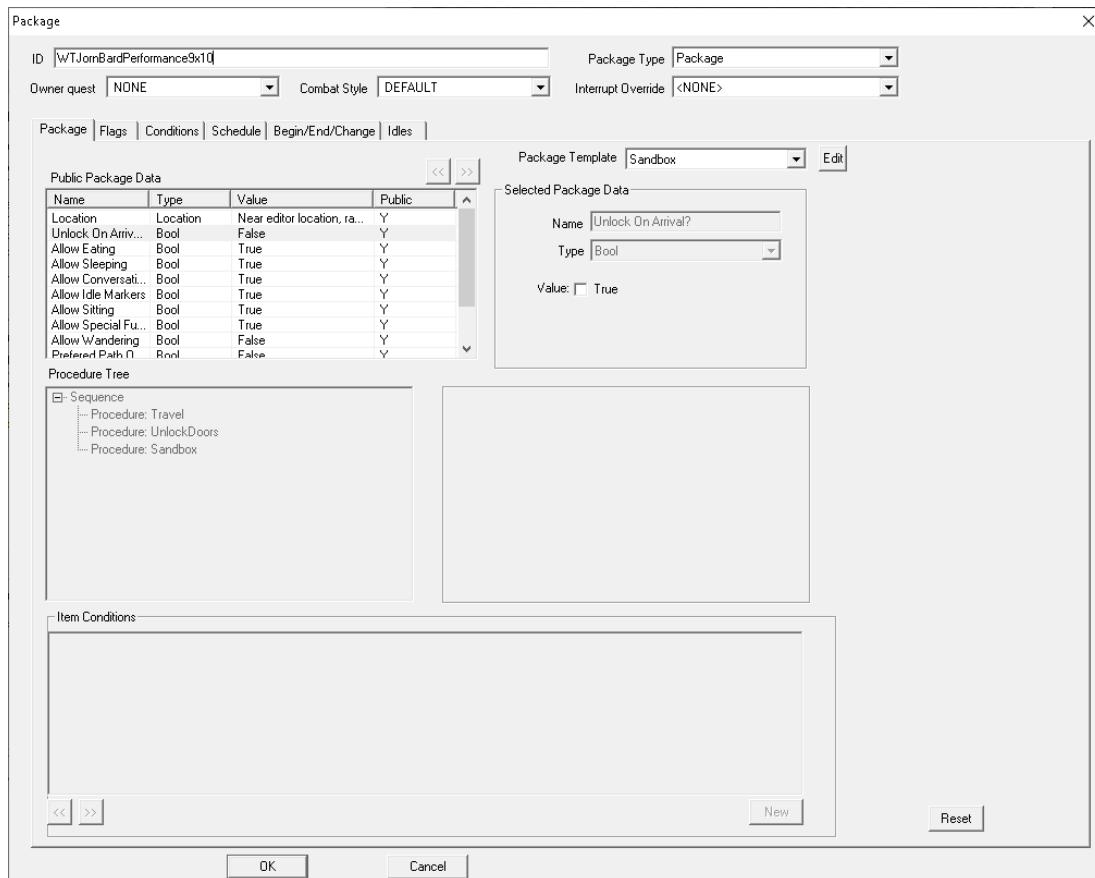


Figure 532 - Package tab.

In Public Package Data, click on Location. On the right hand side, set the Radius field to 0 then click on the button that currently reads 'Near editor location, radius 512'.

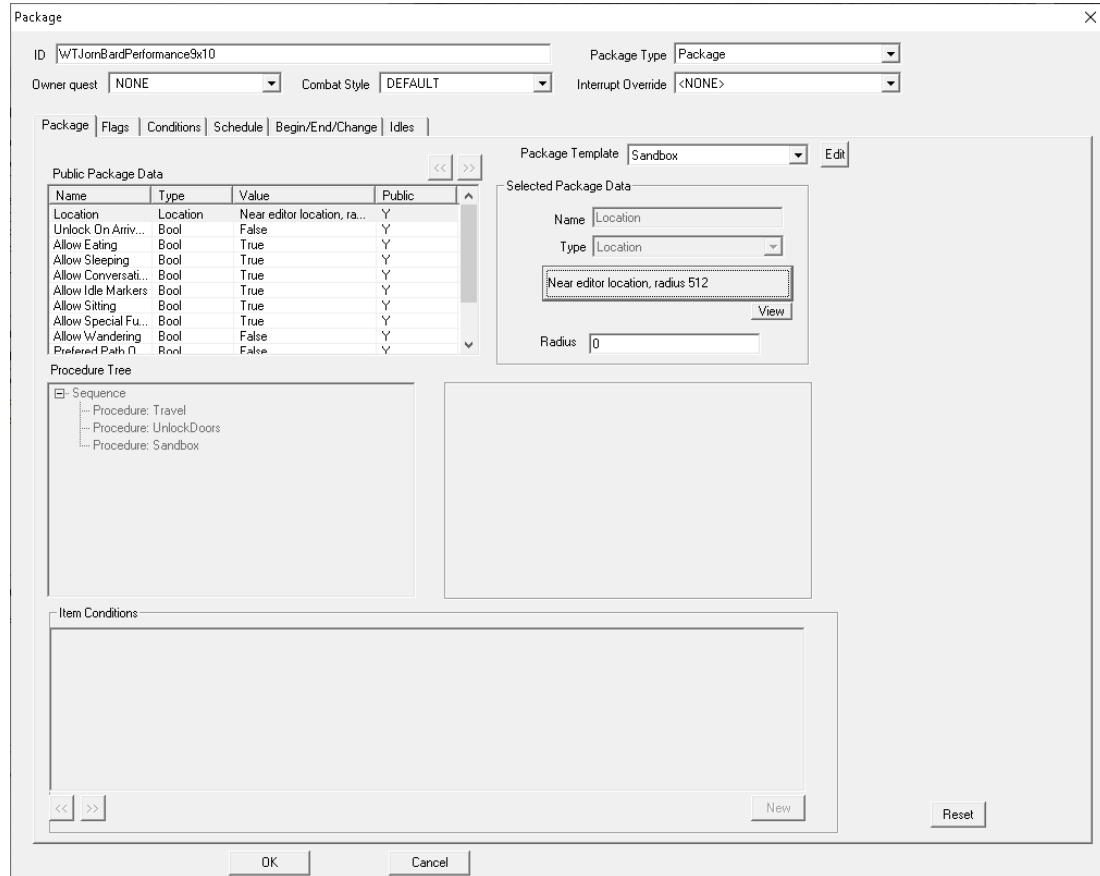


Figure 533 - Setting the sandbox location.

Select Near Reference, click on the Select Reference button, select the XMarker you linked the NPC to earlier and click OK.



Figure 534 - Setting the sandbox package center location.

Go to the Schedule tab. I want Jorn to perform as a bard starting from 9:00 AM until 7:00 PM. Set the Hour drop-down to 9 and the Duration field to 10.0000.

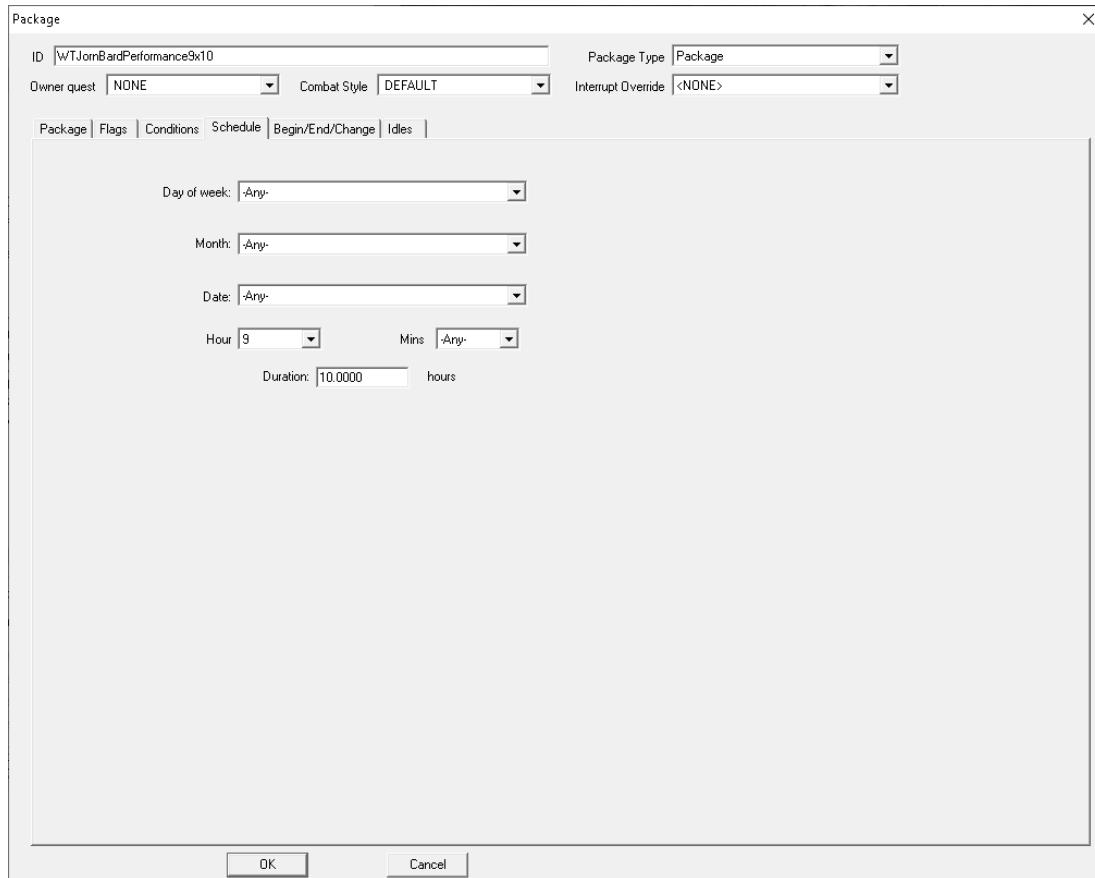


Figure 535 - Setting sandbox duration.

Click OK to close out of Package properties.

Right-click on the old sandbox package that we gave Jorn earlier (WTJornSandboxRiverwood9x10) and select Delete to remove it from the packages list.

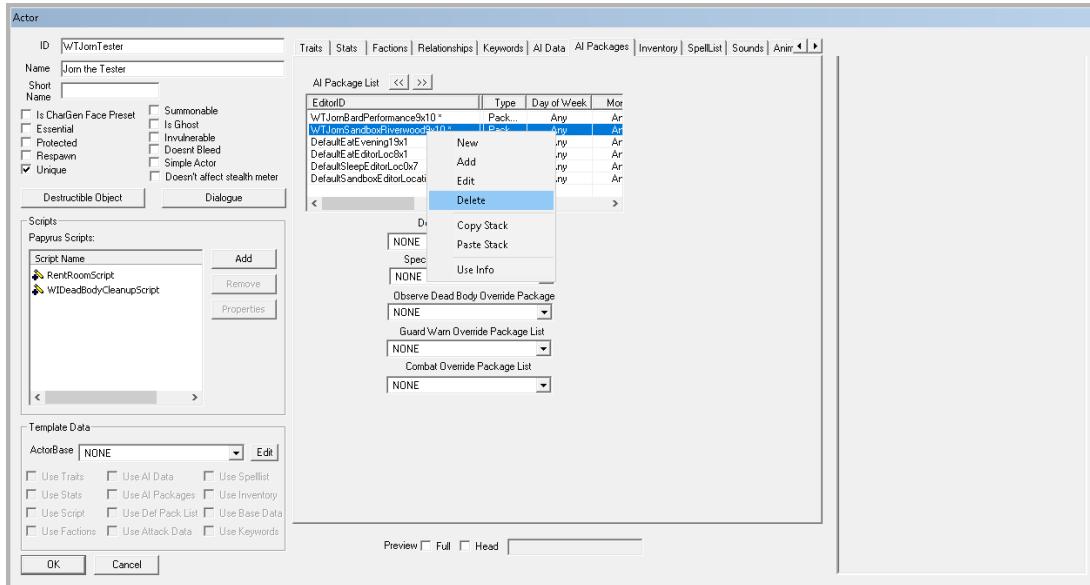


Figure 536 - Removing the old sandbox package.

Basically we want Jorn to spend his day performing at the inn instead of walking around Riverwood.

Click OK to close out of Actor properties.

**Important:** Bards will only perform if the performance location has the **LocTypeInn** keyword.

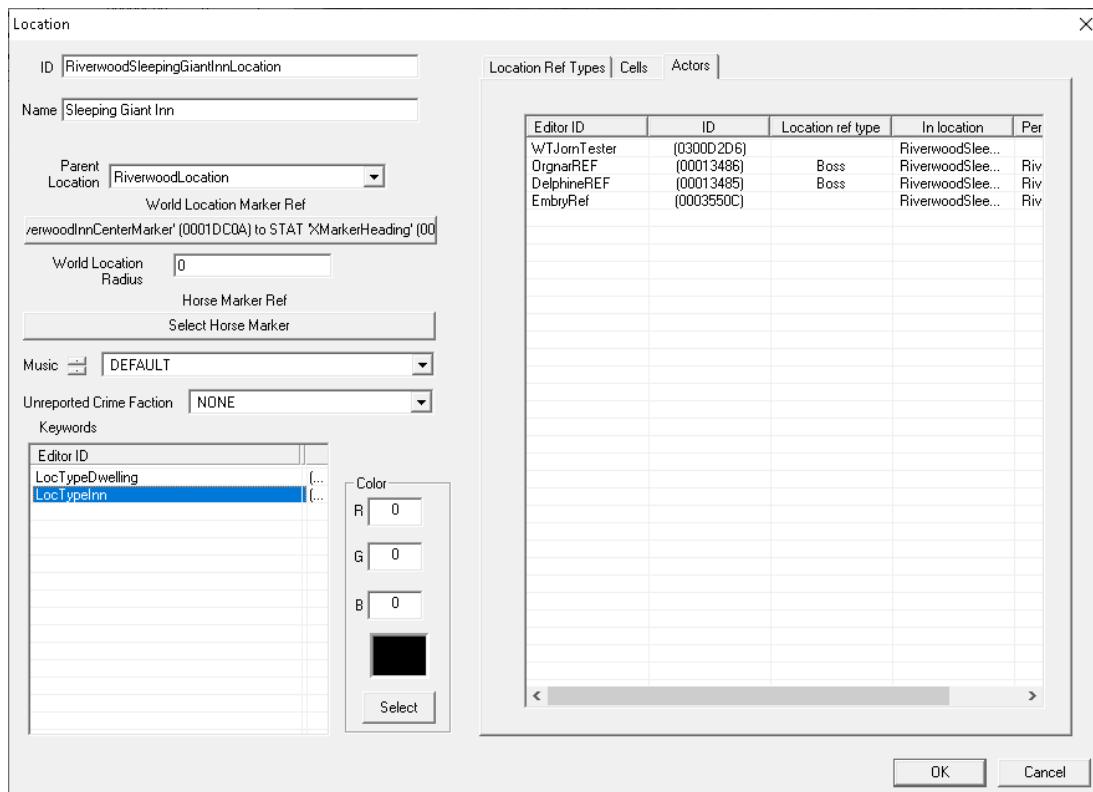


Figure 537 - Riverwood Sleeping Giant Inn location properties.

In-game we'll be able to see Jorn perform during 9:00 AM to 7:00 PM.



Figure 538 - Jorn playing the flute.

If we speak to him, we'll be able to request a performance.



Figure 539 - Requesting a performance.

Setting up a bard with custom performances is a lot more complicated and may be the subject of a separate tutorial.

## MAKING A FOLLOWER

In this section I'll turn Jorn into a basic follower. Since Jorn is using a base-game voice type, we can accomplish this pretty easily by adding him to the PotentialFollowerFaction and CurrentFollowerFaction factions.

In the Object Window, go to Actors > Actor > Actor, double-click or right-click on WTJornTester and select Edit.

Go to the Factions tab, right-click in the factions list and select New.

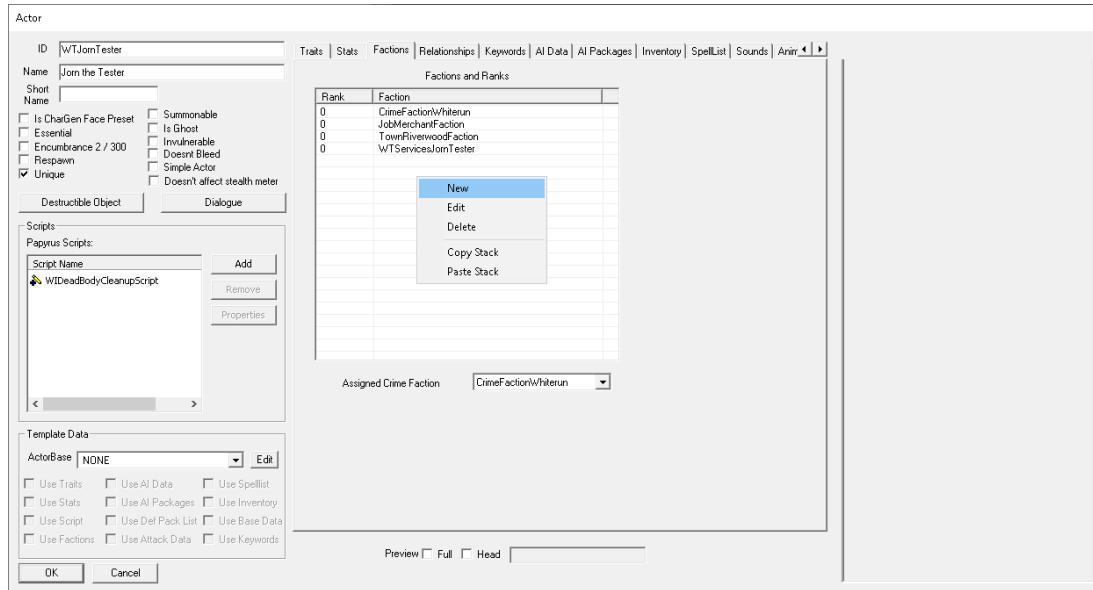


Figure 540 - Adding Jorn to PotentialFollowerFaction.

Filter by 'potentialfollower', click on PotentialFollowerFaction to highlight it then click OK.

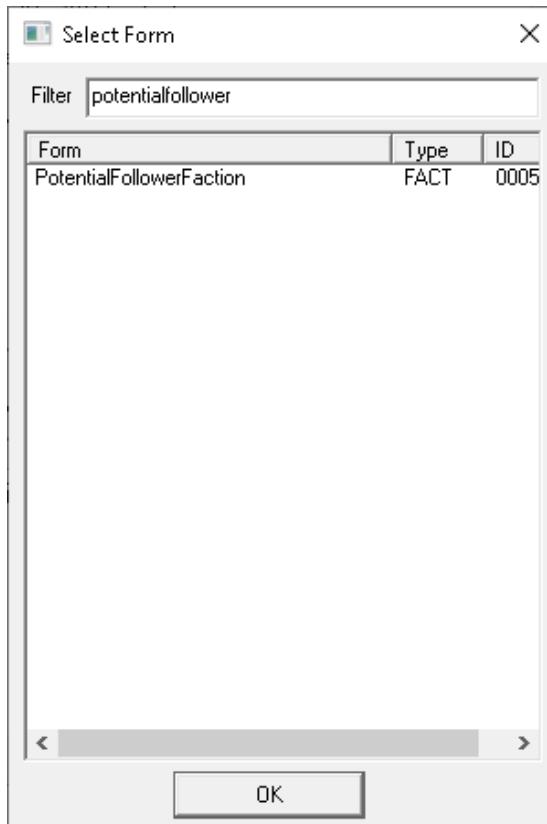


Figure 541 - Factions list.

Lastly, right-click again in the factions list and select New.

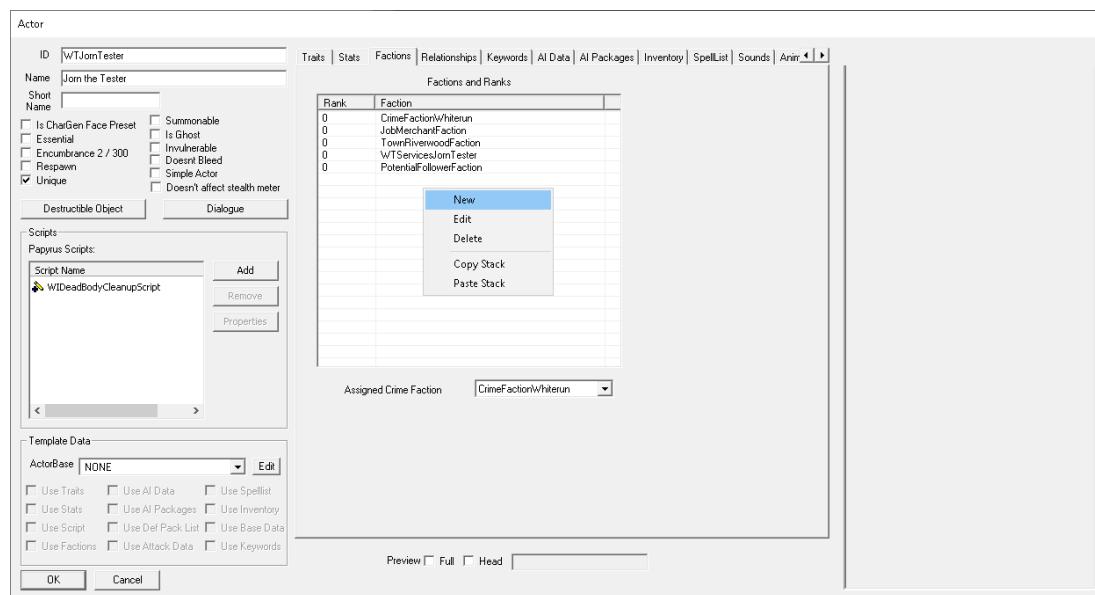


Figure 542 - Adding Jorn to CurrentFollowerFaction.

Filter by ‘currentfollower’, click on CurrentFollowerFact to highlight it then click OK.

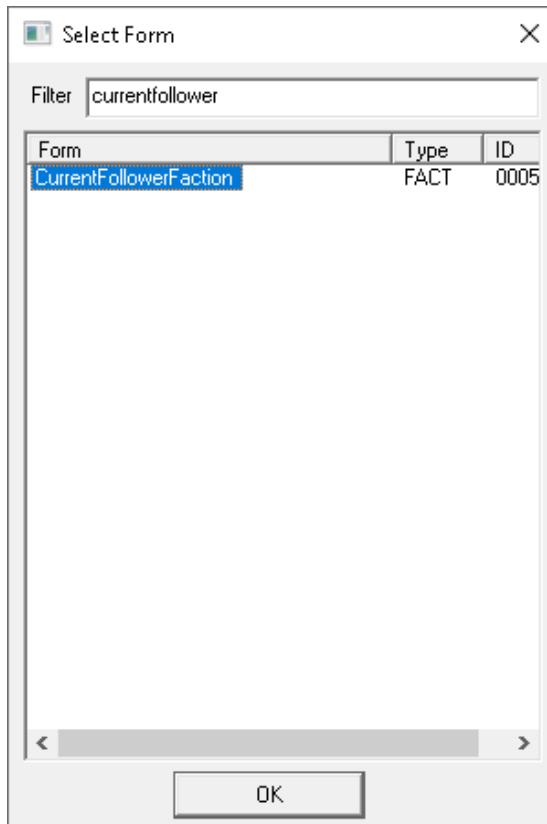


Figure 543 - Factions list.

Click in the Rank column next to CurrentFollowerFact and set the value to -1.

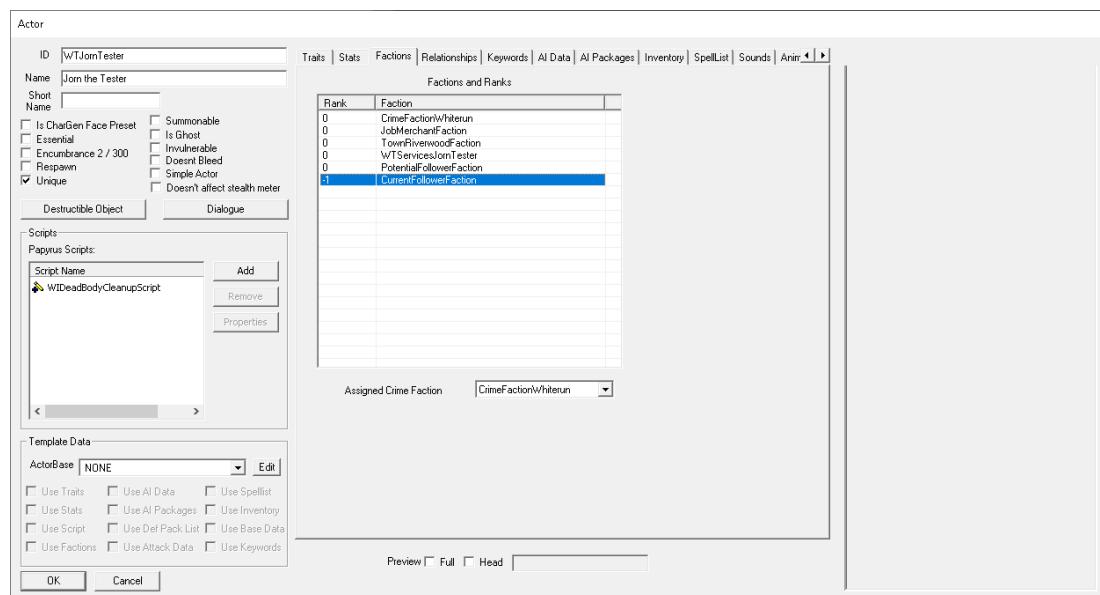


Figure 544 - Setting the faction rank of CurrentFollowerFact.

Normally we need to do a favour for the NPC first before we can hire them, but we can increase our NPC's disposition towards the player with a relationship so that we can ask them to follow us immediately.

Go to the Relationship tab, right-click in the relationships list and select New.

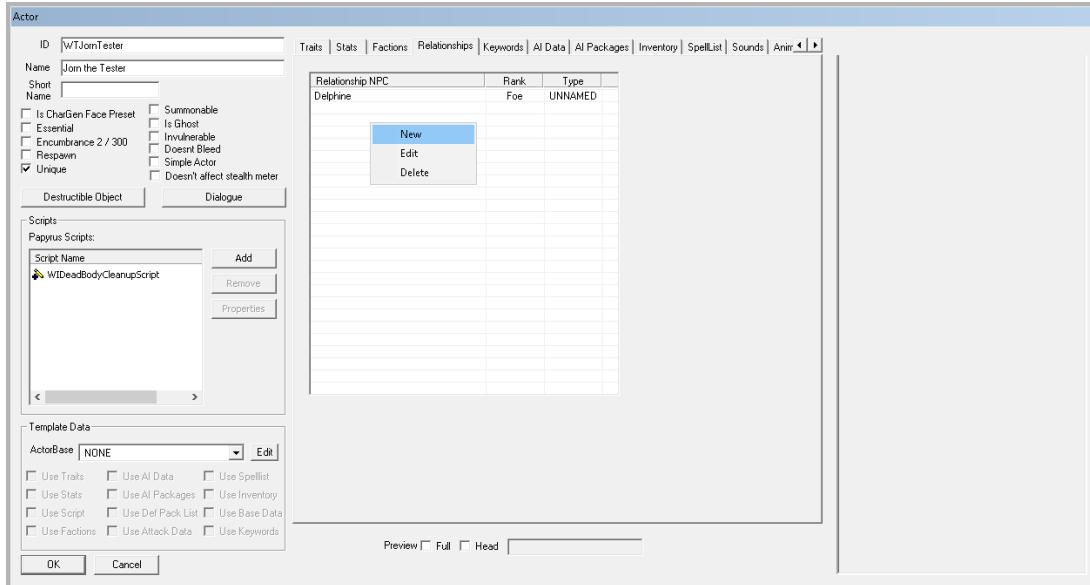


Figure 545 - Adding a new relationship to Jorn.

Set a unique ID. For this example I just went with WTJornPlayer. Make sure the Parent NPC drop-down is set to WTJornTester and set the Child NPC drop-down to Player. Finally, set the Relationship Level drop-down to Ally then click OK.

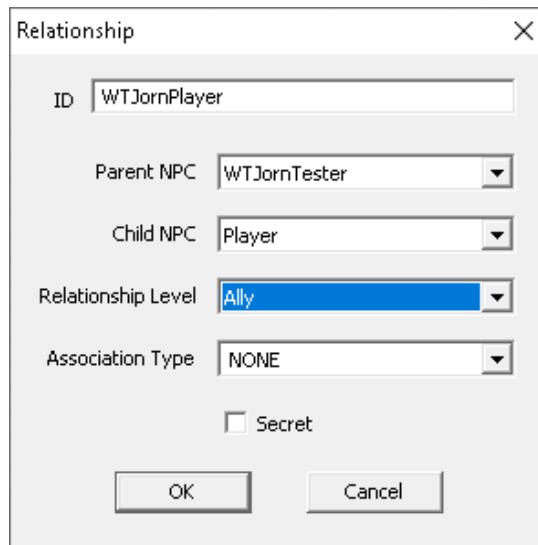


Figure 546 - Setting Jorn as the player's ally.

Click OK to close out of Actor properties.

If we go in-game, we should now be able to ask Jorn to follow us.



Figure 547 - Jorn set up as a follower.

If your NPC uses custom voice acting, we'll need to set up the various follower dialogue commands manually.

The following screenshots will show you examples from Athir's follower dialogue in Wyrmstooth.

**Important:** Add these topics to a quest that does not complete. If the quest containing these topics ever completes, these topics will become unavailable.

Firstly, here's how the 'I need your help, follow me' topic is set up. We can run the following papyrus to set this NPC as our current follower.

```
(self.GetOwningQuest() as dialoguefollowerscript).SetFollower(akSpeaker)
```

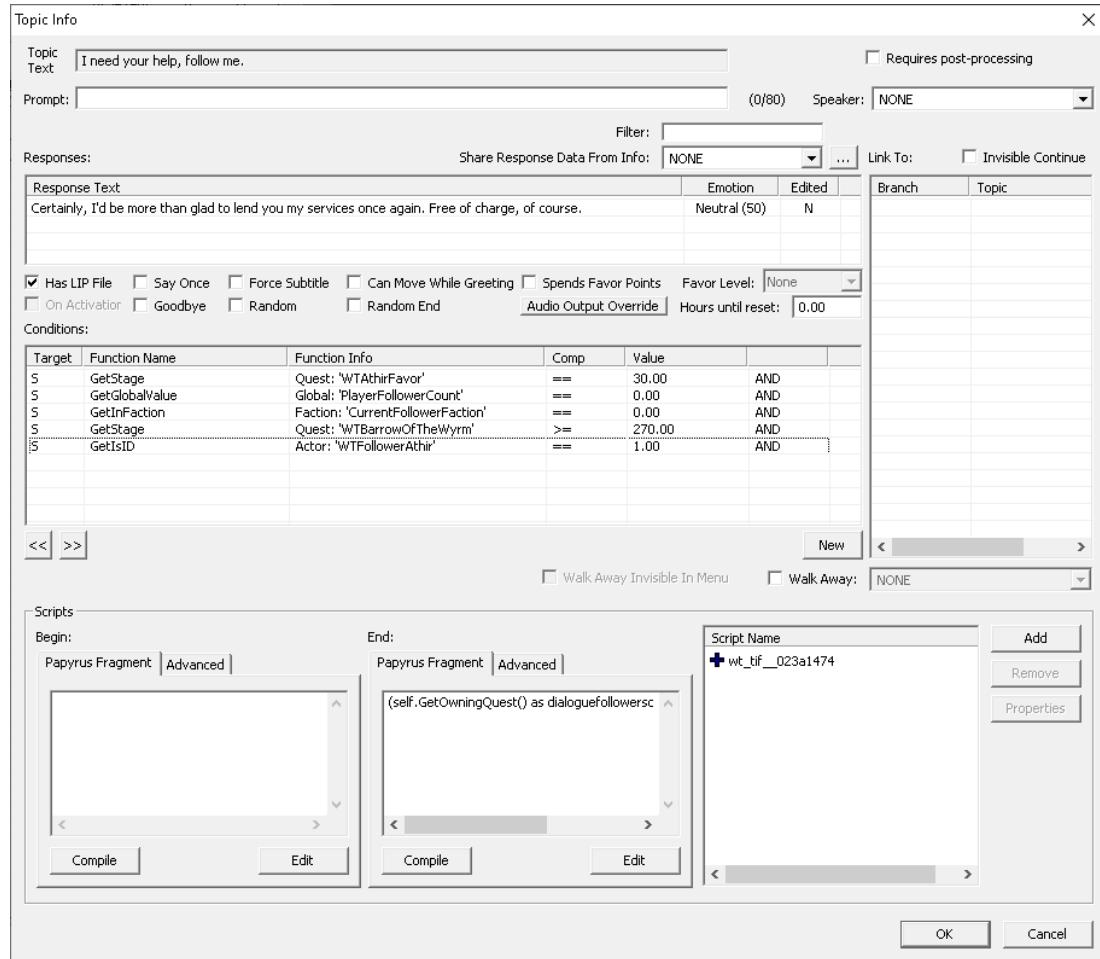


Figure 548 - 'Follow me' topic.

In the conditions, we're checking to make sure Athir isn't our current follower by checking the faction rank of CurrentFollowerFaction and ensuring it's set to 0. We also need to check the PlayerFollowerCount global value and make sure it's 0 so we won't see this line of dialogue if the player already has a follower.

**Note:** The default follower system permits only one NPC to follow the player at a time. The current follower needs to be dismissed before another NPC can be recruited.

Here's the set up for the 'Wait here' topic.

The papyrus we need to run for this topic is as follows:

```
(self.GetOwningQuest() as dialoguefollower).FollowerWait()
```

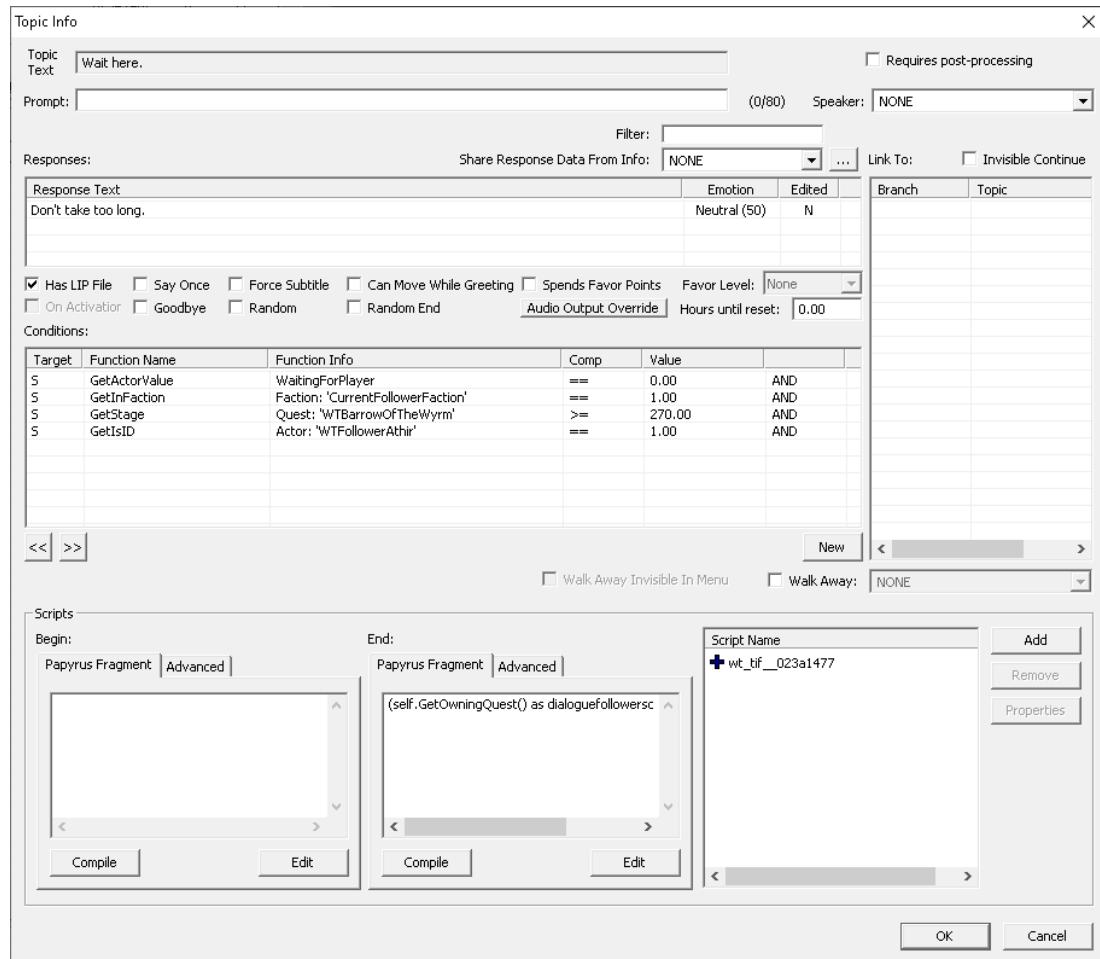


Figure 549 - 'Wait here' topic.

Now that Athir is our current follower, we need to make sure the faction rank of CurrentFollowerFaction is 1. Before we can tell him to wait, we need to make sure we haven't already told him to wait. We can do this by checking the WaitingForPlayer actor value on Athir and making sure it's set to 0.

Here's the set up for the 'Follow me' topic. This is used if we've asked our follower to wait and we want them to resume following us again.

The papyrus we need to run for this topic is as follows:

```
(self.GetOwningQuest() as dialoguefollowerscript).FollowerFollow()
```

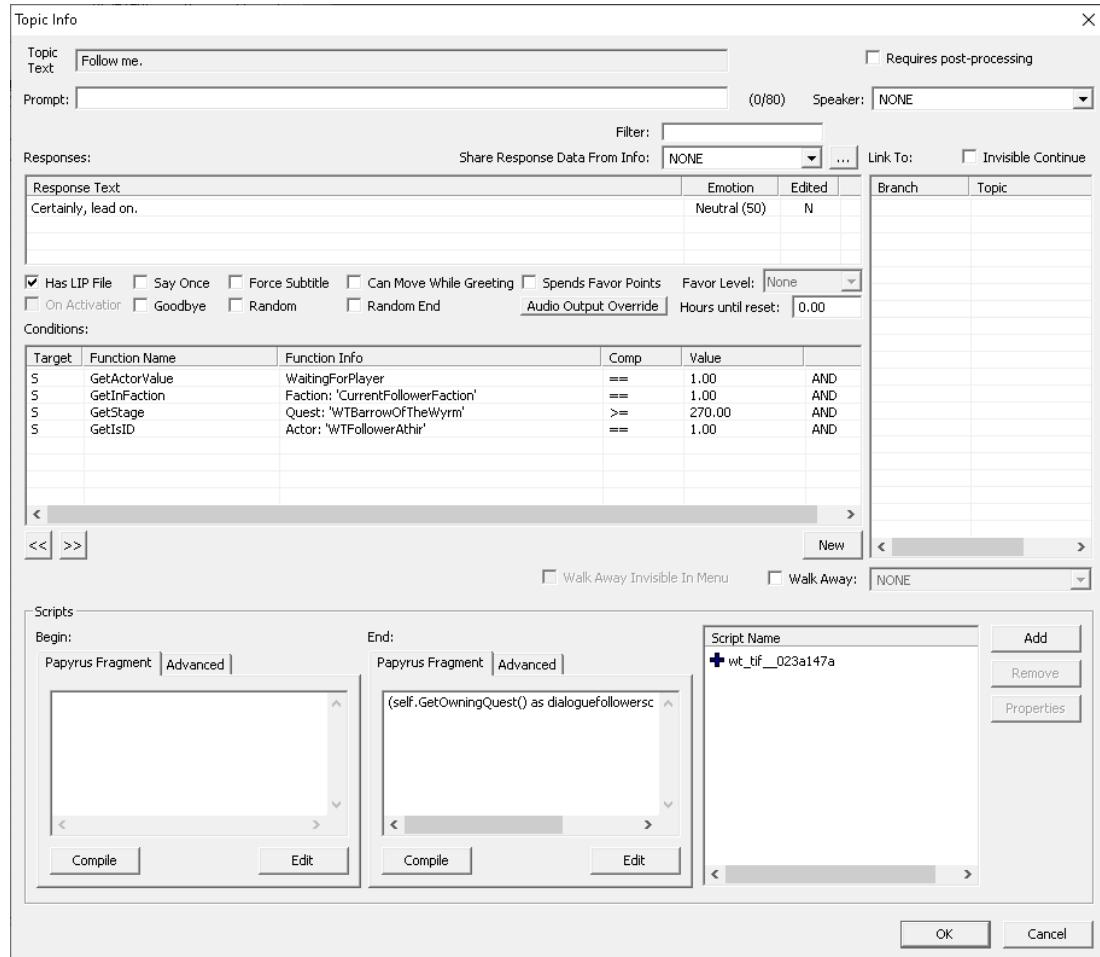


Figure 550 - 'Follow me' topic.

Here we're checking the WaitingForPlayer actor value to make sure it's set to 1 to indicate that this NPC is currently waiting for the player.

If we need to open the NPC's inventory to trade items, we can do so with the following command:

```
akSpeaker.OpenInventory(false)
```

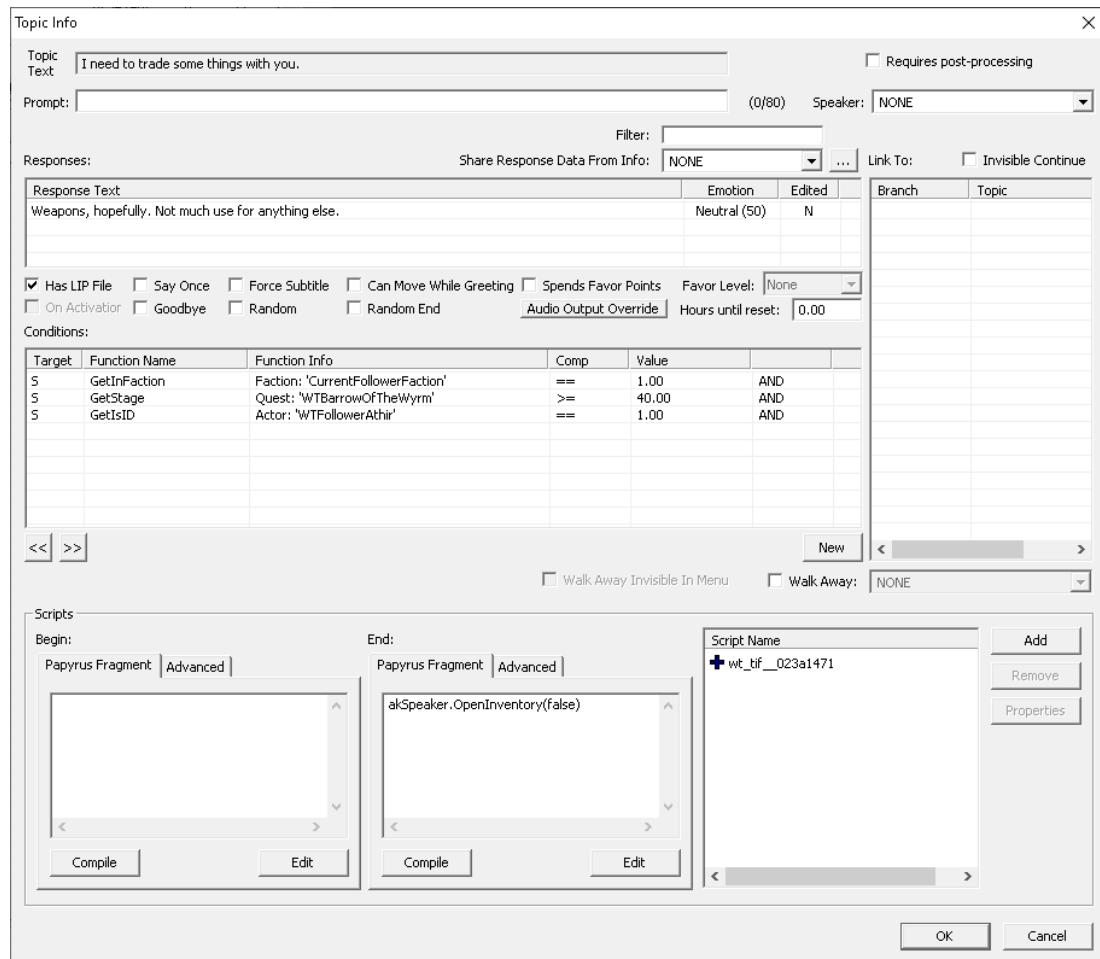


Figure 551 - 'I need to trade some things with you' topic.

We just need to make sure the NPC is in CurrentFollowerFaction.

To give the NPC a specific command, we can use the following papyrus code:

```
akSpeaker.SetDoingFavor(true)
```

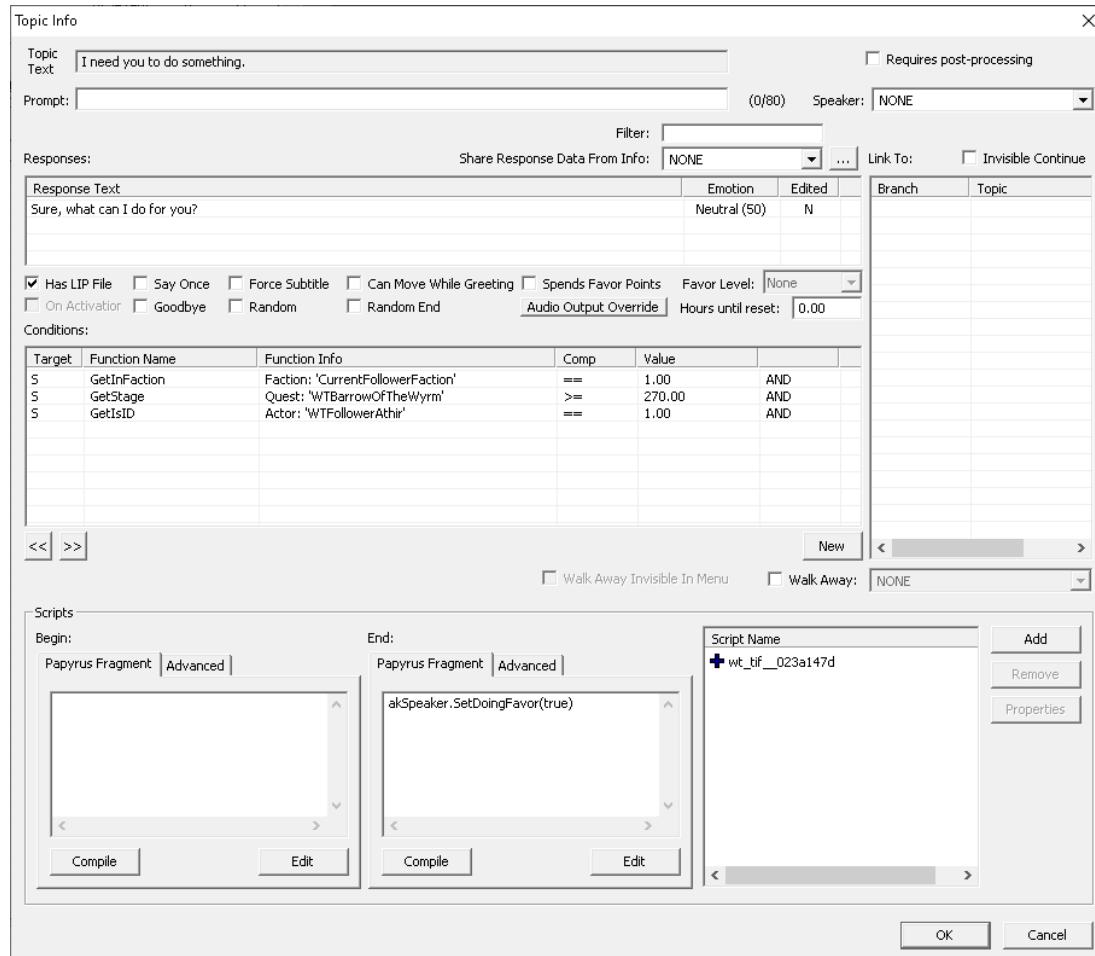


Figure 552 - 'I need you to do something' topic.

Again, we just need to make sure the NPC is in CurrentFollowerFaction.

Finally, to dismiss the NPC as our follower, we can use the following code:

```
(pDialogueFollower as dialoguefollowerscript).DismissFollower(0, 0)
```

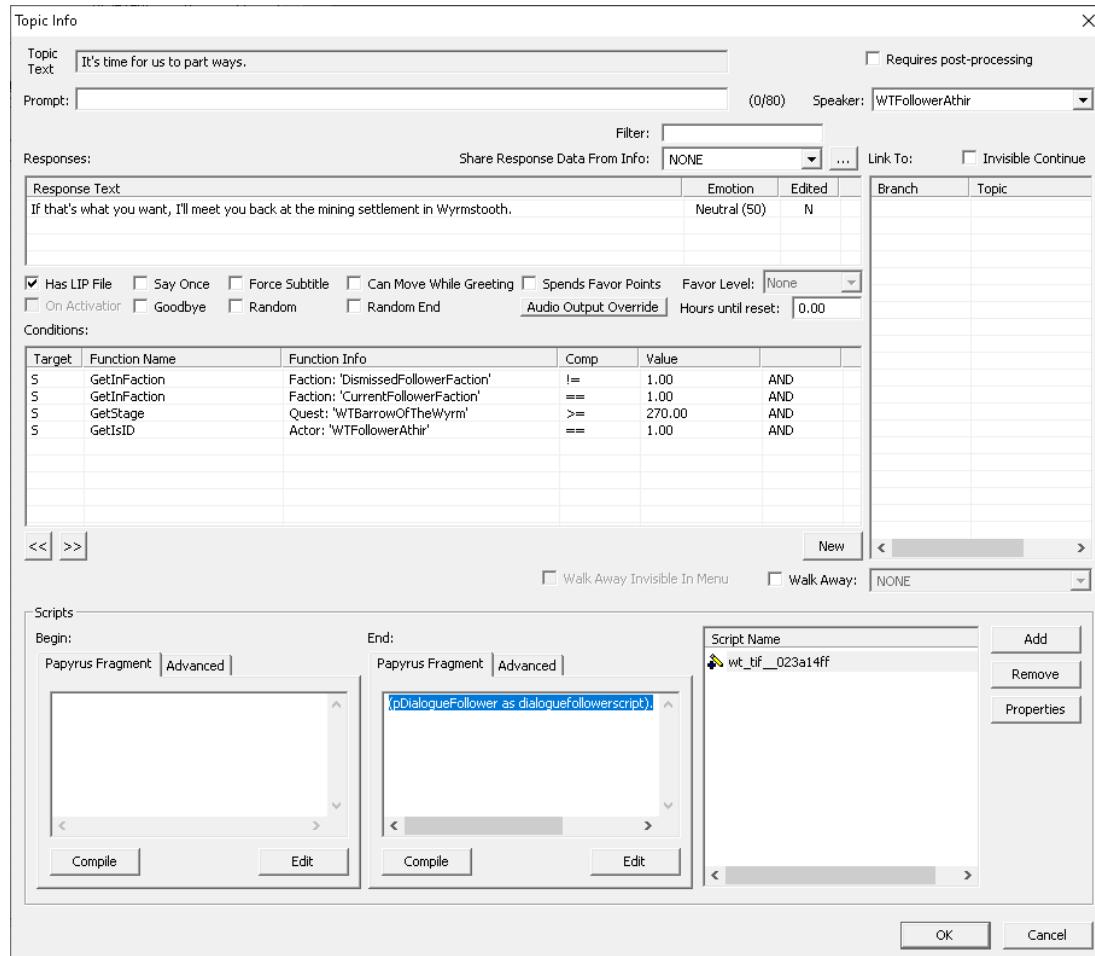


Figure 553 - 'It's time for us to part ways' topic.

Here we need to make sure the NPC is in CurrentFollowerFaction and is not a member of DismissedFollowerFaction.

Here are the properties on the papyrus fragment. It's just a Quest property named pDialogueFollower pointing to the DialogueFollower quest.

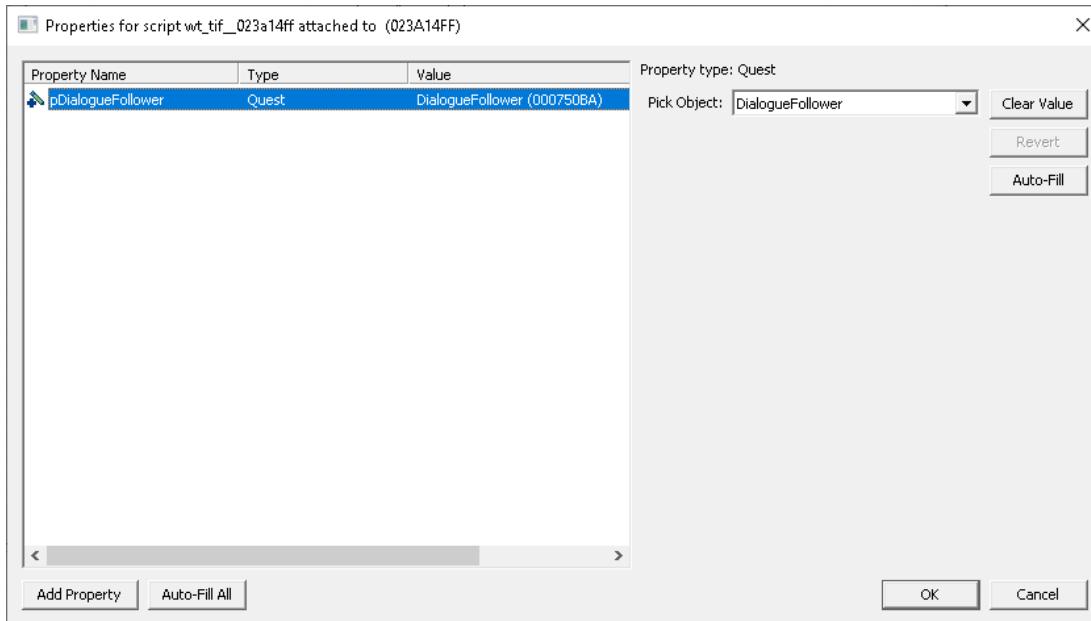


Figure 554 - Script properties for the dismiss topic papyrus fragment.

For more information setting up quest dialogue, see the section [Adding dialogue to a quest](#).

## SETTING UP A HOME OWNER

In this section I'll cover setting up an NPC to lock their doors at night and deliver trespass warnings to the player if they are caught breaking in and entering.

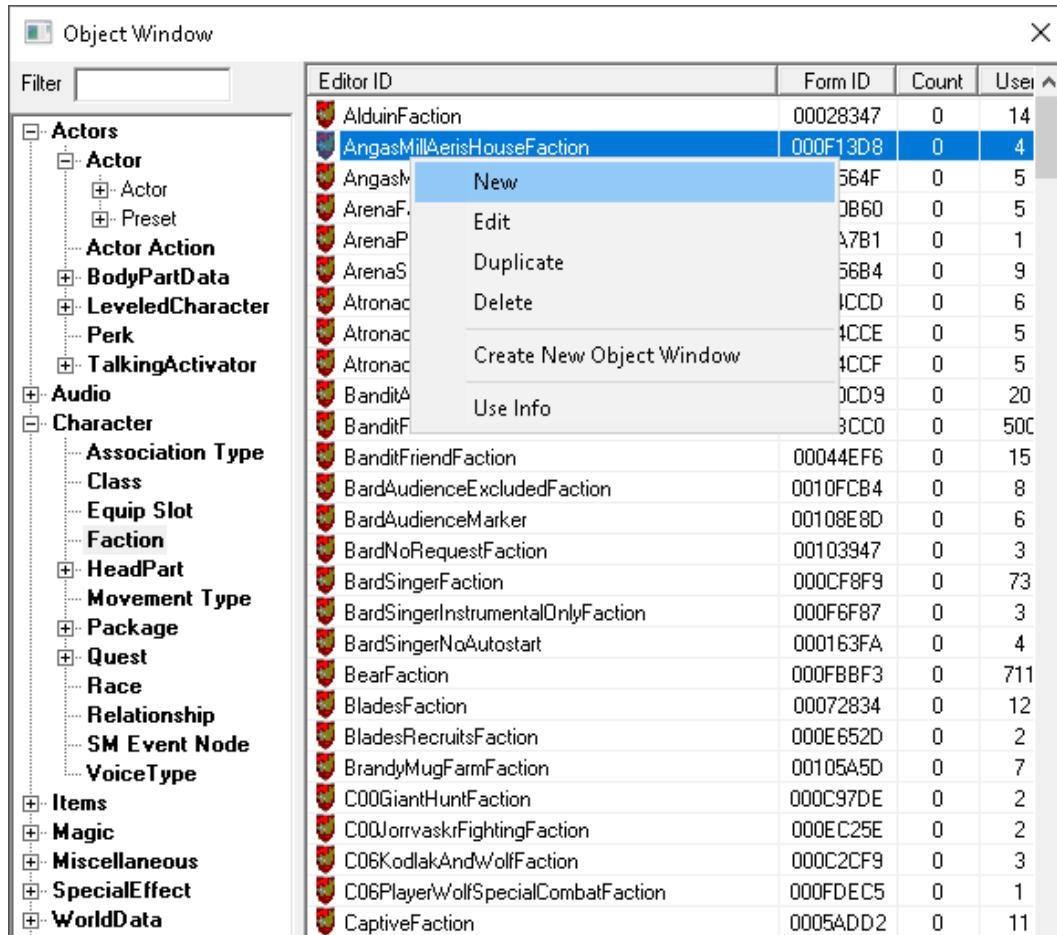
For this example, Jorn moved out of the Riverwood Inn and now he's going to take up residence in the interior cell LundsHut01. After removing the cobwebs, skeevers and Lund's corpse, it's time to make this place a home.



Figure 555 - Jorn in Lund's hut.

The first thing we need to do is set up a new faction for this house.

In the Object Window, go to Character > Faction, right-click on one of the existing factions and select New.



Editor ID	Form ID	Count	User
AlduinFaction	00028347	0	14
AngasMillAerisHouseFaction	000F13D8	0	4
AngastF	New	564F	0
ArenaF	Edit	0B60	0
ArenaP	Duplicate	17B1	0
ArenaS	Delete	56B4	0
AtronacF	Create New Object Window	1CCD	0
AtronacP		1CCE	0
AtronacS		1CCF	0
BanditF	Use Info	0CD9	0
BanditF		3CC0	0
BanditFriendFaction	00044EF6	0	15
BardAudienceExcludedFaction	0010FCB4	0	8
BardAudienceMarker	00108E8D	0	6
BardNoRequestFaction	00103947	0	3
BardSingerFaction	000CF8F9	0	73
BardSingerInstrumentalOnlyFaction	000F6F87	0	3
BardSingerNoAutostart	000163FA	0	4
BearFaction	000FBBF3	0	711
BladesFaction	00072834	0	12
BladesRecruitsFaction	000E652D	0	2
BrandyMugFarmFaction	00105A5D	0	7
C00GiantHuntFaction	000C97DE	0	2
C00JorrvaskrFightingFaction	000EC25E	0	2
C06KodlakAndWolfFaction	000C2CF9	0	3
C06PlayerWolfSpecialCombatFaction	000FDEC5	0	1
CaptiveFaction	0005ADD2	0	11

Figure 556 - Creating a new faction.

Set the faction ID. I'm just going to call it WTJornHouseFaction.

Make sure to tick 'Can Be Owner' then click OK.

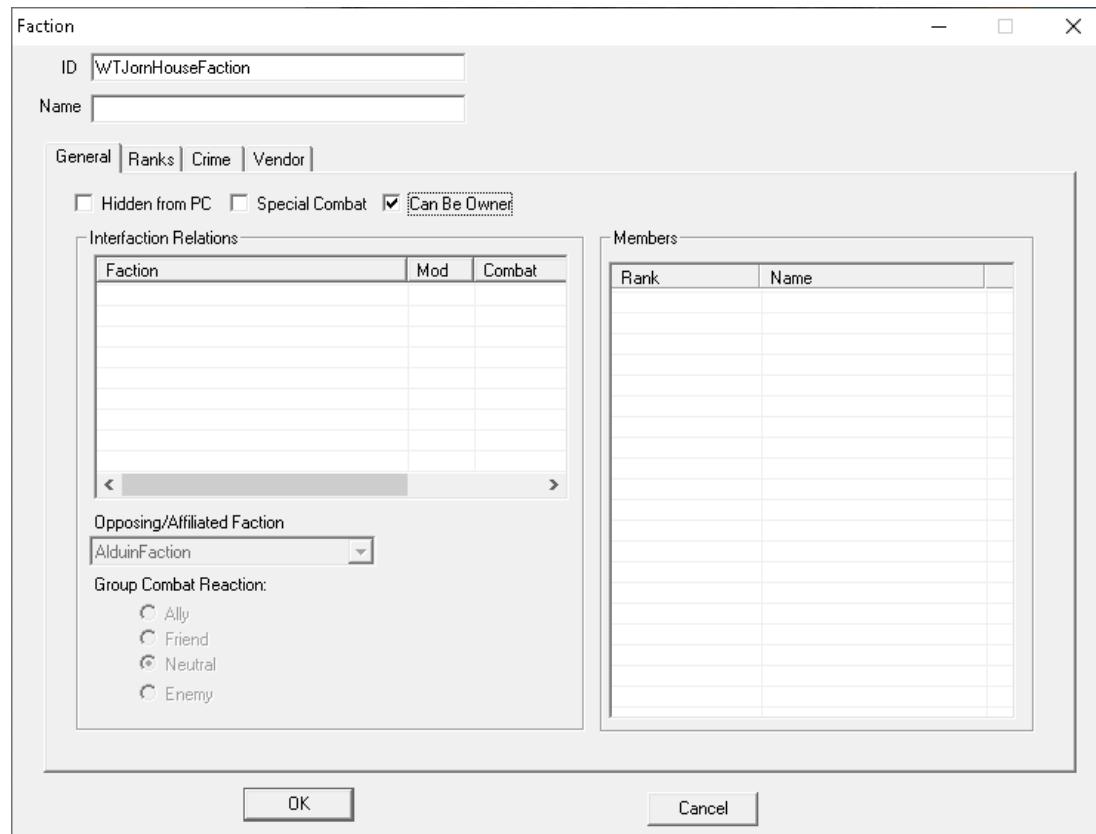
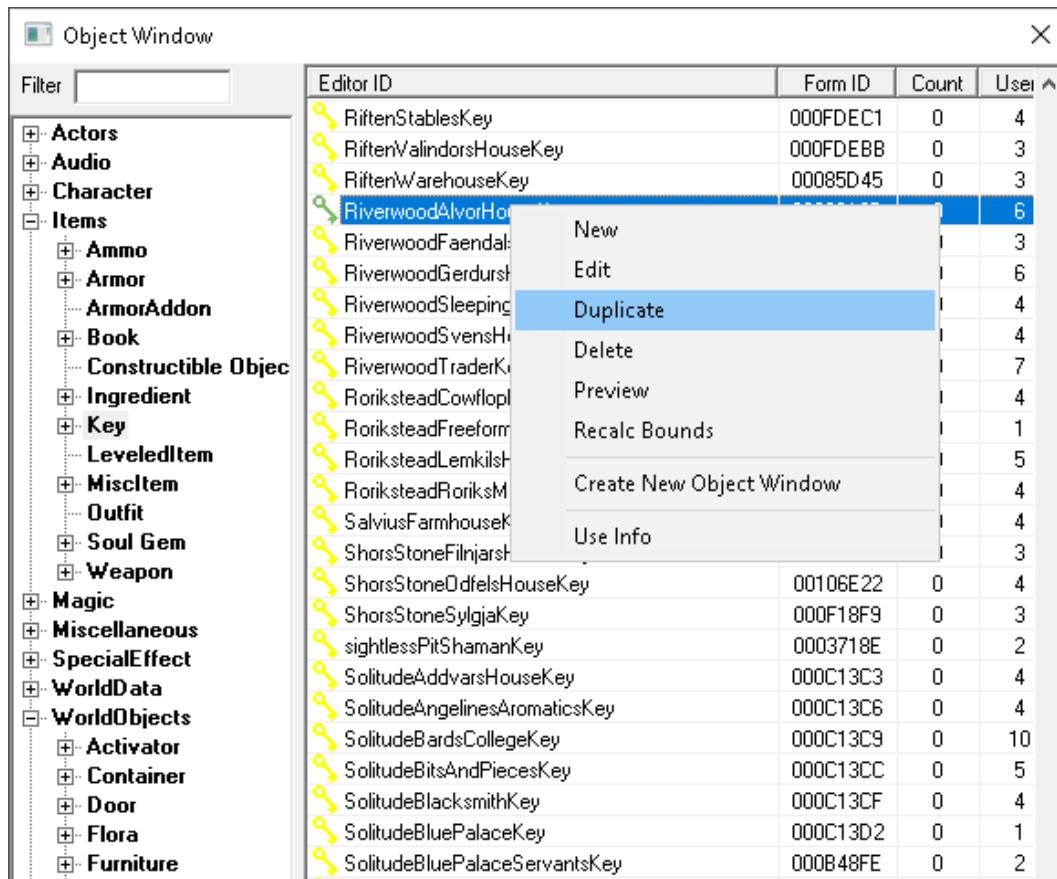


Figure 557 - Setting up the house faction.

Next, let's create a new key for the front door.

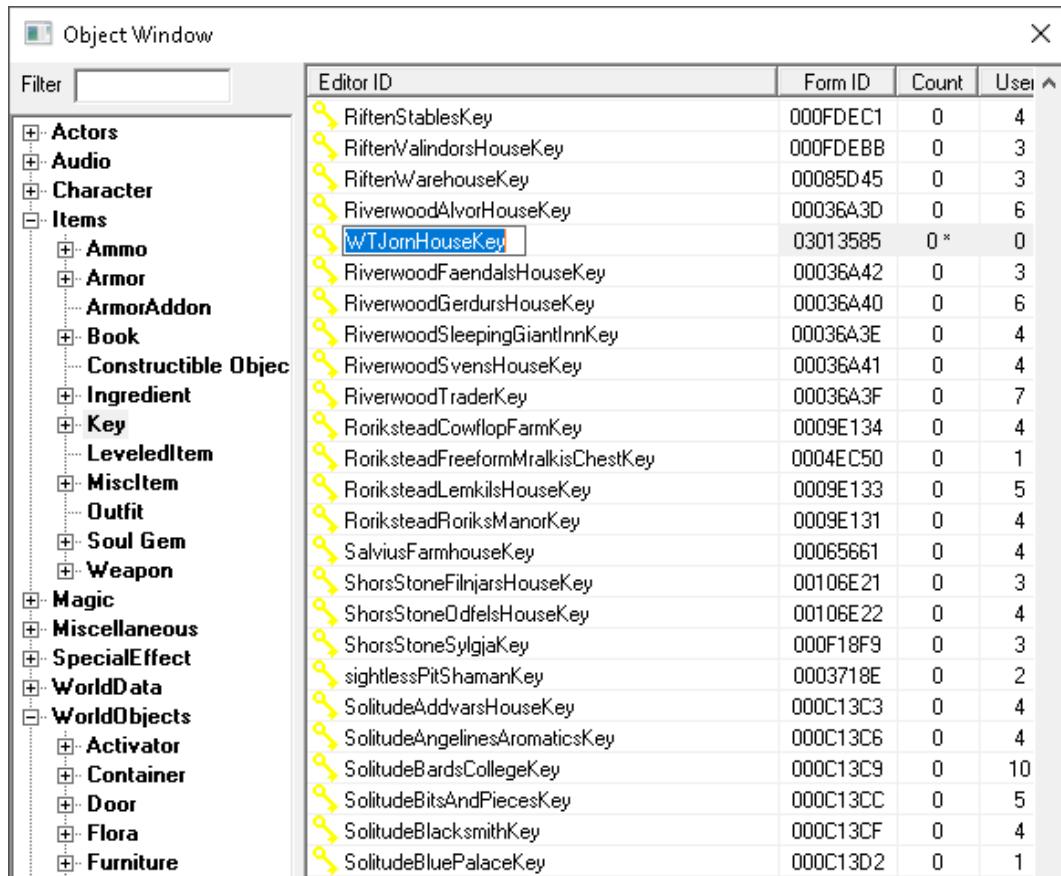
In the Object Window, go to Items > Key, right-click on one of the existing keys and select Duplicate.



Editor ID	Form ID	Count	User
RiftenStablesKey	000FDEC1	0	4
RiftenValindorsHouseKey	000FDDEBB	0	3
RiftenWarehouseKey	00085D45	0	3
RiverwoodAlvorHouseKey	New		6
RiverwoodFaendralKey	Edit		3
RiverwoodGerdurstKey	Duplicate		6
RiverwoodSleepingKey	Delete		4
RiverwoodSvensHouseKey	Preview		4
RiverwoodTraderKey	Recalc Bounds		7
RoriksteadCowflopKey	Create New Object Window		4
RoriksteadFreeformKey	Use Info		1
RoriksteadLemkilshKey			5
RoriksteadRoriksMKey			4
SalviusFarmhouseKey			4
ShorsStoneFilnjarsHouseKey			3
ShorsStoneOdfelsHouseKey	00106E22	0	4
ShorsStoneSylgjaKey	000F18F9	0	3
sightlessPitShamanKey	0003718E	0	2
SolitudeAddvarsHouseKey	000C13C3	0	4
SolitudeAngelinesAromaticsKey	000C13C6	0	4
SolitudeBardsCollegeKey	000C13C9	0	10
SolitudeBitsAndPiecesKey	000C13CC	0	5
SolitudeBlacksmithKey	000C13CF	0	4
SolitudeBluePalaceKey	000C13D2	0	1
SolitudeBluePalaceServantsKey	000B48FE	0	2

Figure 558 - Duplicating an existing key.

Click on the duplicate to select it then press 'F2' to rename it.



Editor ID	Form ID	Count	User
RiftenStablesKey	000FDEC1	0	4
RiftenValindorsHouseKey	000FDDEBB	0	3
RiftenWarehouseKey	00085D45	0	3
RiverwoodAlvorHouseKey	00036A3D	0	6
WTJornHouseKey	03013585	0 *	0
RiverwoodFaendalsHouseKey	00036A42	0	3
RiverwoodGerdurshHouseKey	00036A40	0	6
RiverwoodSleepingGiantInnKey	00036A3E	0	4
RiverwoodSvensHouseKey	00036A41	0	4
RiverwoodTraderKey	00036A3F	0	7
RoriksteadCowflopFarmKey	0009E134	0	4
RoriksteadFreeformMralkisChestKey	0004EC50	0	1
RoriksteadLemkilshHouseKey	0009E133	0	5
RoriksteadRoriksManorKey	0009E131	0	4
SalviusFarmhouseKey	00065661	0	4
ShorsStoneFilnjarsHouseKey	00106E21	0	3
ShorsStoneOdfelsHouseKey	00106E22	0	4
ShorsStoneSylgiaKey	000F18F9	0	3
sightlessPitShamanKey	0003718E	0	2
SolitudeAddvarsHouseKey	000C13C3	0	4
SolitudeAngelinesAromaticsKey	000C13C6	0	4
SolitudeBardsCollegeKey	000C13C9	0	10
SolitudeBitsAndPiecesKey	000C13CC	0	5
SolitudeBlacksmithKey	000C13CF	0	4
SolitudeBluePalaceKey	000C13D2	0	1

Figure 559 - Renaming the duplicate key.

When prompted to create a new object, click No.



Figure 560 - Create New Object pop-up.

Next we need to set this key as the key that unlocks the front door.

Double-click or right-click on the front door and select Edit.

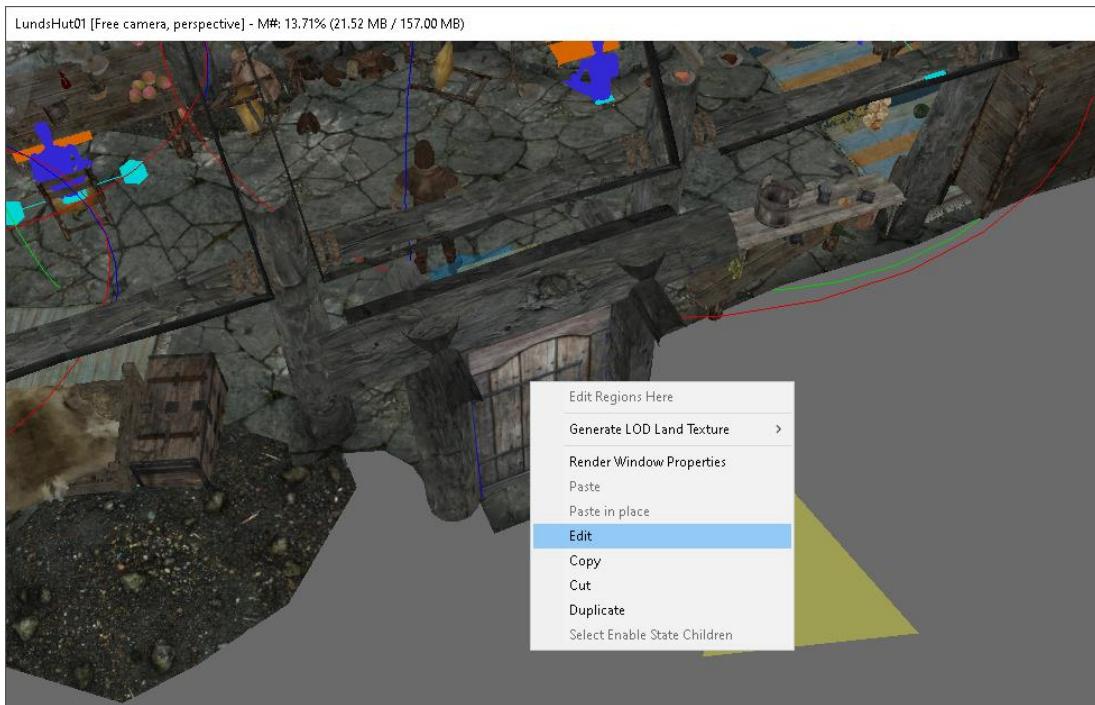


Figure 561 - Opening the reference properties for the front door.

Go to the Lock tab and tick the Locked tickbox.

Set the lock level. For this example I just set it to Adept.

Set the Key drop down to the key we just created.

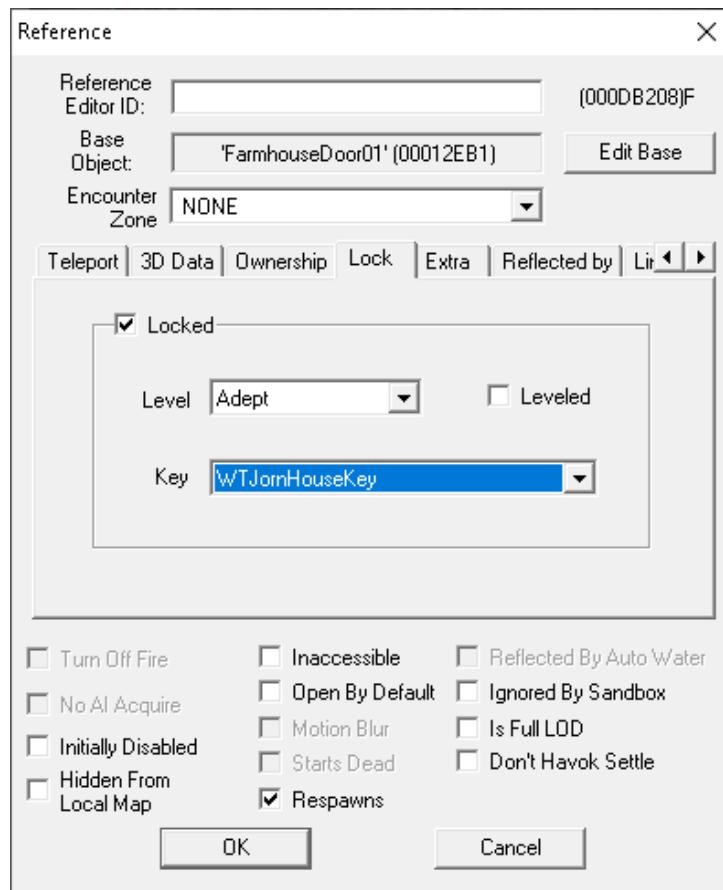


Figure 562 - Setting up a door lock.

Click OK to close out of Reference properties.

Next, we need to add Jorn to his new house faction.

In the Object Window, go to Actors > Actor > Actor and double-click or right-click on Jorn and select Edit.

Go to the Factions tab, right-click in the factions list and select New.

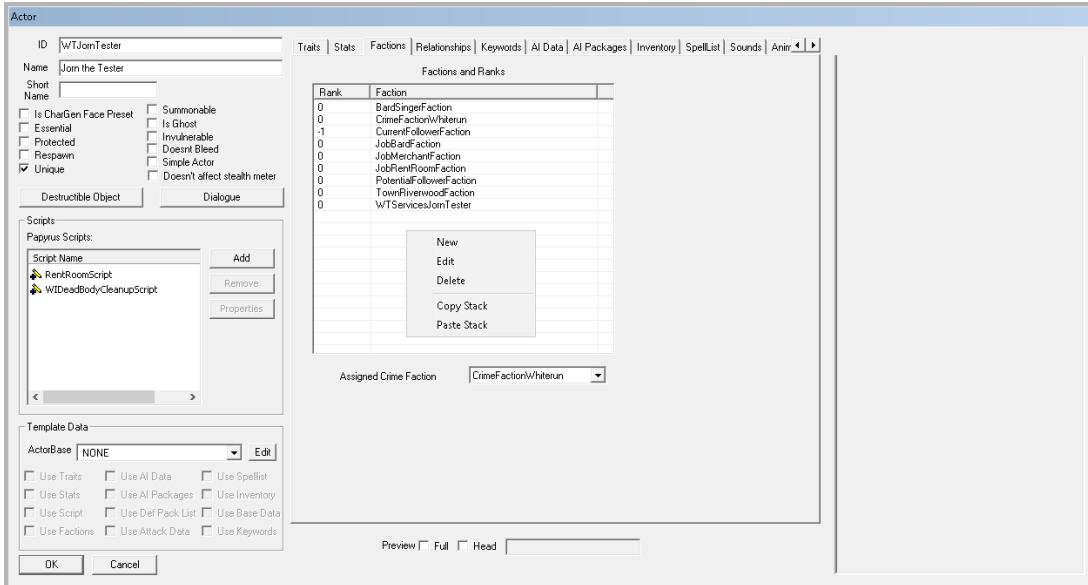


Figure 563 - Adding Jorn to the new house faction.

Select the house faction you just made then click OK.

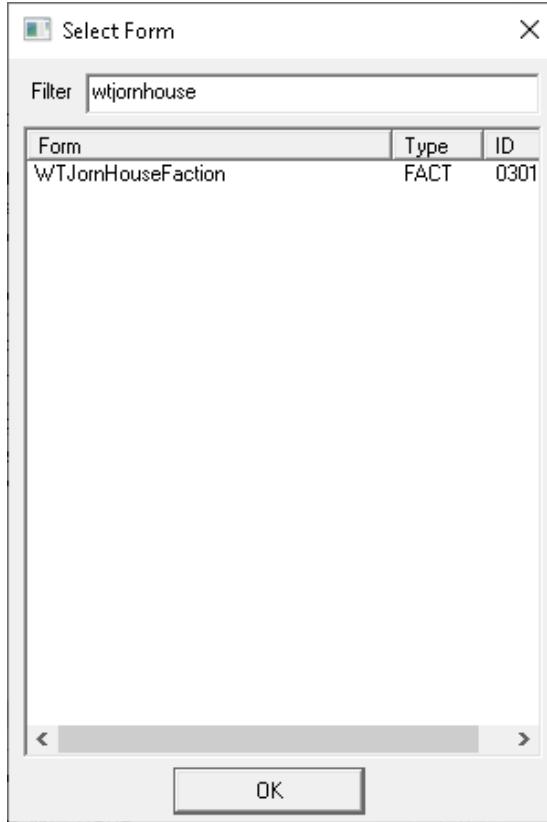


Figure 564 - Selecting the WTJornHouseFaction faction.

Since we've moved Jorn out of the Riverwood Inn, I'd also like him to retire as a bard and as a merchant so I removed him from those factions but left him as a potential follower.

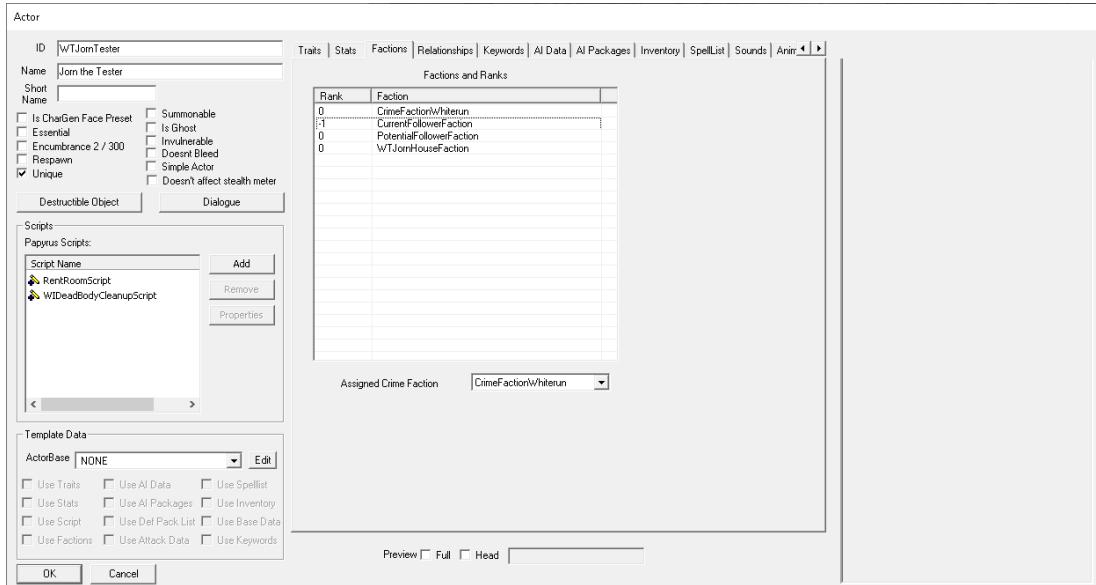


Figure 565 - Jorn removed from the bard and merchant factions.

Let's change his schedule a bit.

Go to the AI Packages tab and delete the WTIJornBardPerformance9x10 package.

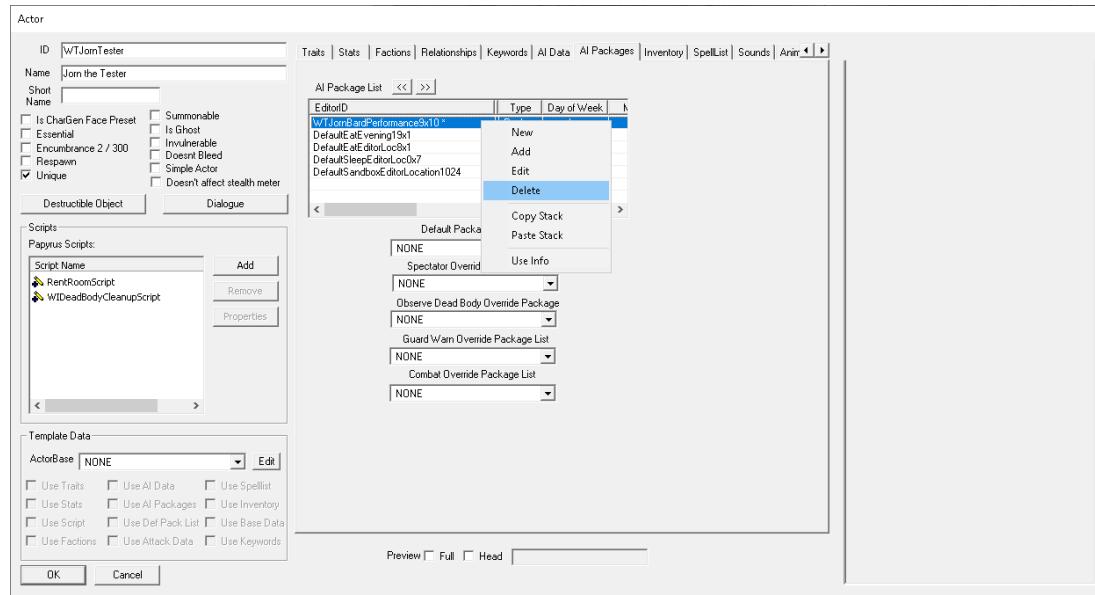


Figure 566 - Removing Jorn's bard performance package.

Let's have him spend some time outside during the day.

Right-click in the packages list and select New.

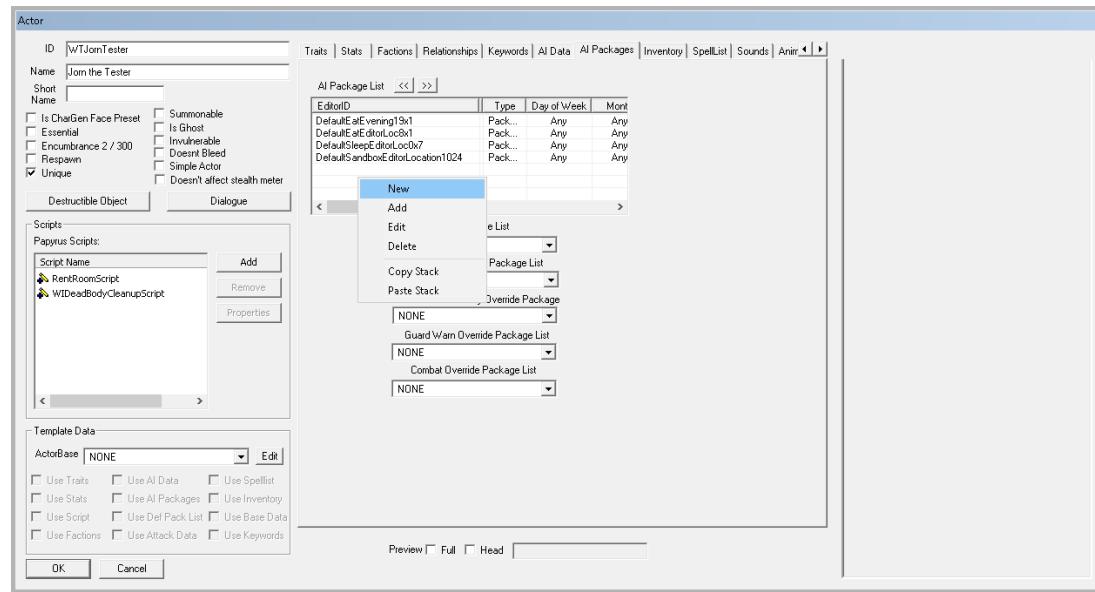


Figure 567 - Adding a new package.

Set the package ID. For this package I'm going to set it to WTJornSandboxOutside9x10.

Set the Package Template to Sandbox.

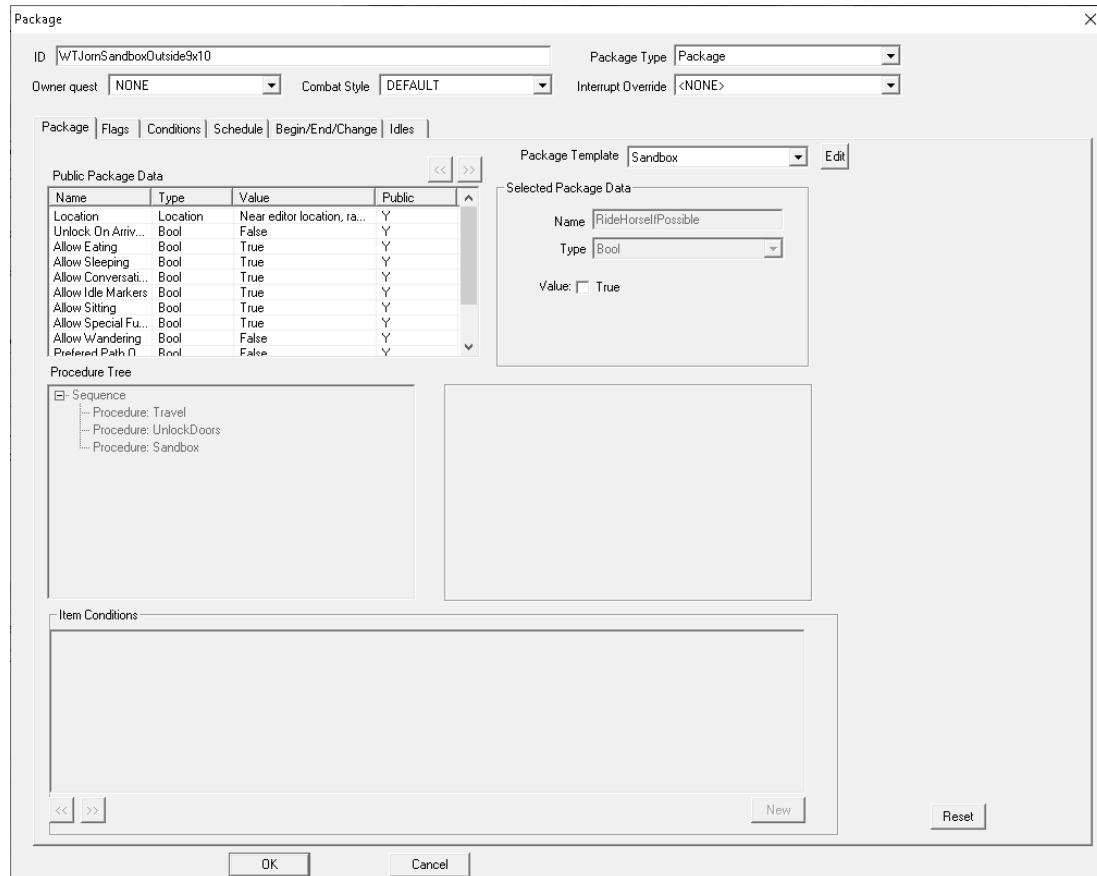


Figure 568 - Setting the ID and package template.

In the Public Package Data list, click on Location. Set the Radius field to 2048 then click on the button above it that currently reads 'Near editor location, radius 512'.

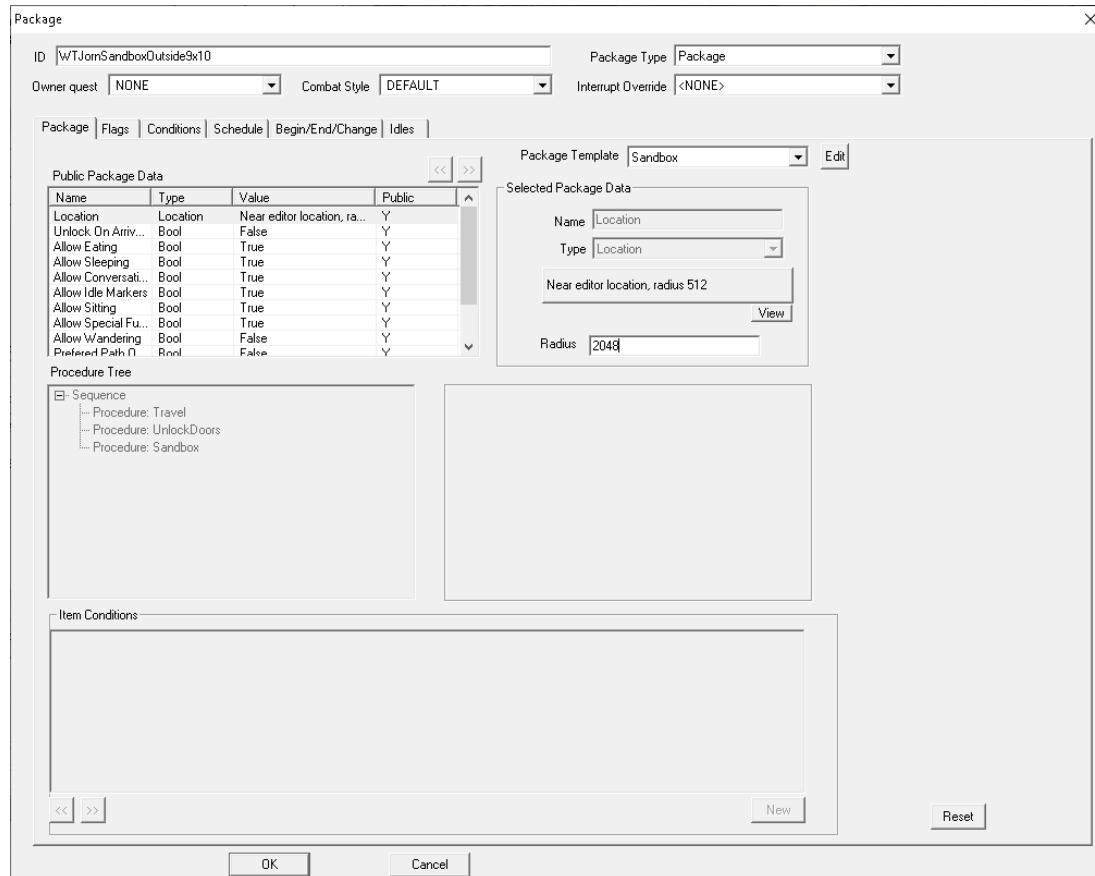


Figure 569 - Setting the package sandbox location.

Select Near Reference then click on the Select Reference button.

For this example, I'm just going to select the Map Marker outside Lund's Hut as the center point for Jorn's sandbox package.

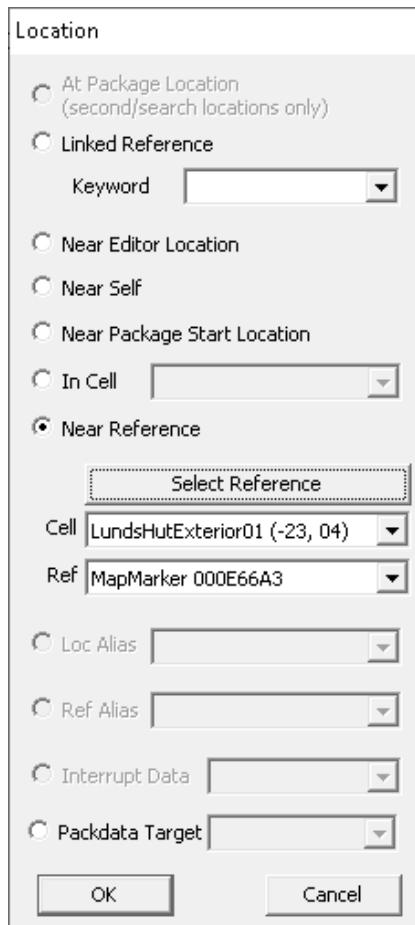


Figure 570 - Selecting the map marker as the center point of Jorn's sandbox package.

Click OK.



Figure 571 - The map marker outside Lund's Hut.

Normally you'd want to add in an XMarker or XMarkerHeading to use as the center point for a sandbox package.

There's not a lot to do outside Lund's Hut, so tick Allow Wandering.

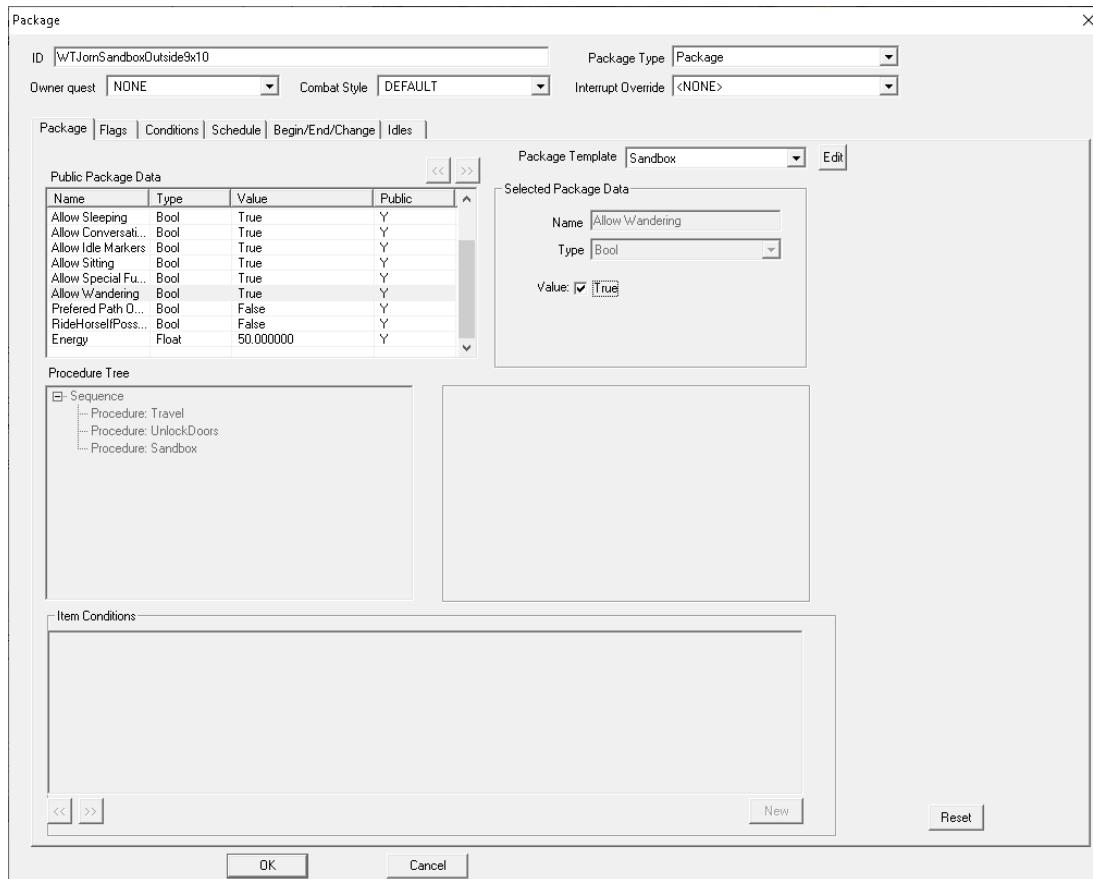


Figure 572 - Turning on Allow Wandering.

Lastly, go to the Schedule tab.

Set the Hour drop-down to 9 and the duration field to 10.0000.

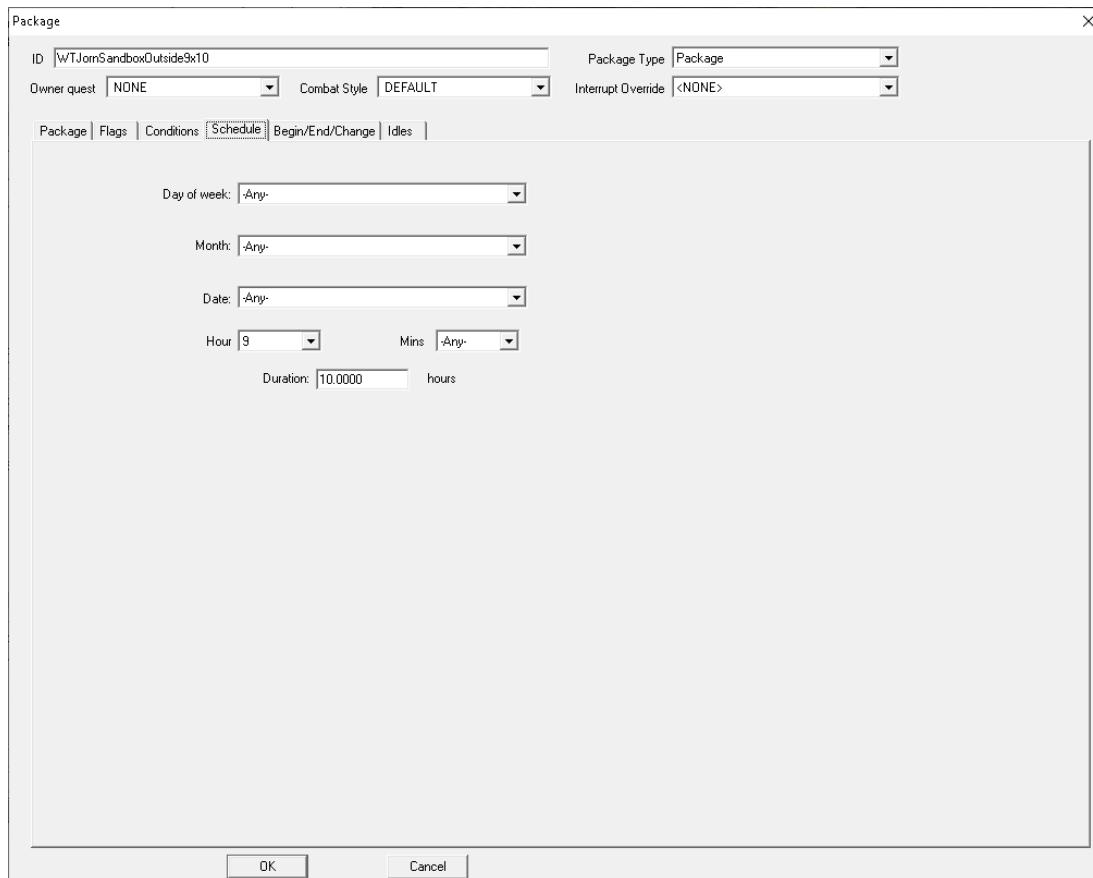


Figure 573 - Setting the schedule for Jorn's aimless wandering.

Click OK to close out of Package properties.

Ensure the new package is at the top of the package hierarchy by highlighting it and clicking on the '<<' button.

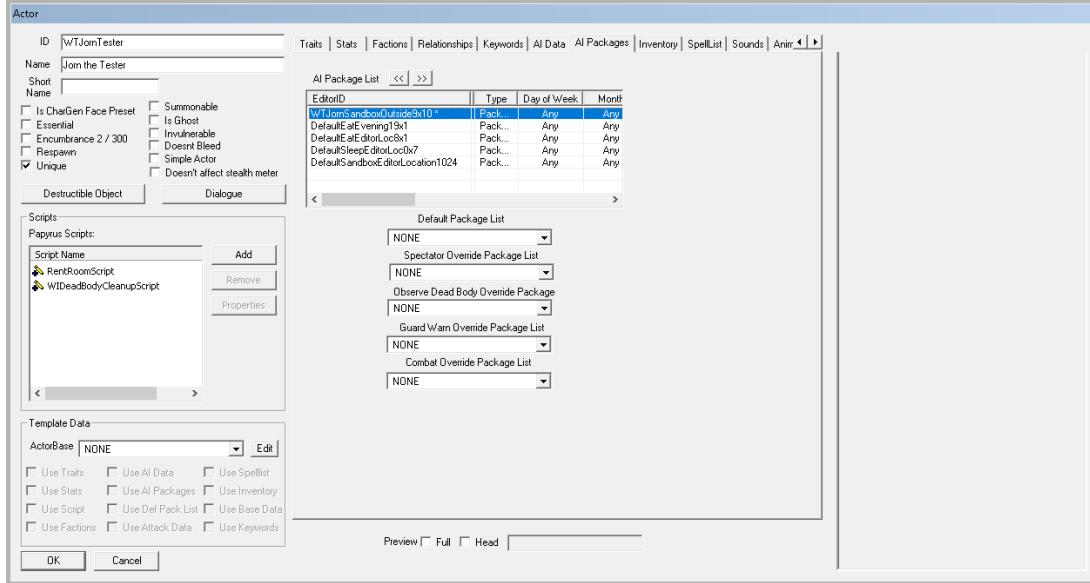


Figure 574 - Sorting the package hierarchy if necessary.

Set the Default Package List drop-down to DefaultHomeOwnerPackageList.

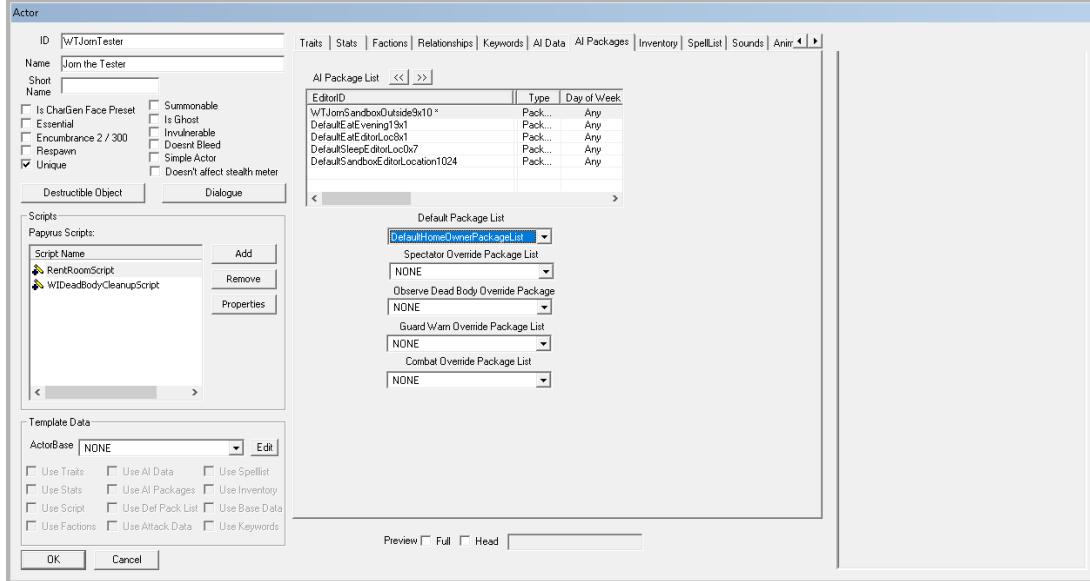


Figure 575 - Setting a default package list.

Click on RentRoomScript under Papyrus Scripts to highlight it then click on Remove to remove it from Jorn since we don't need it anymore.

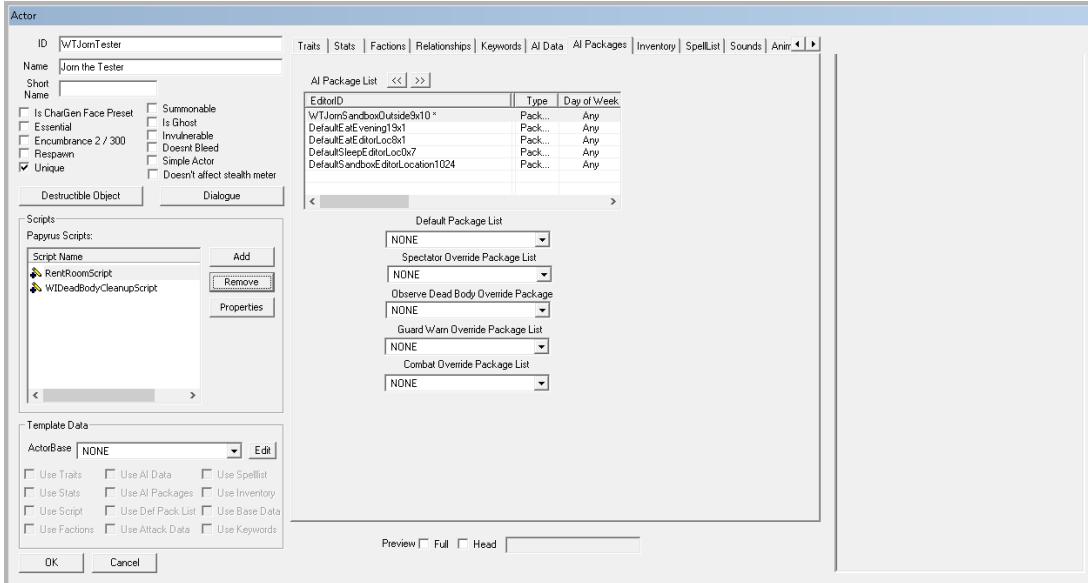


Figure 576 - Removing RentRoomScript.

Lastly, go to the Inventory tab, right-click in the inventory list and select New.

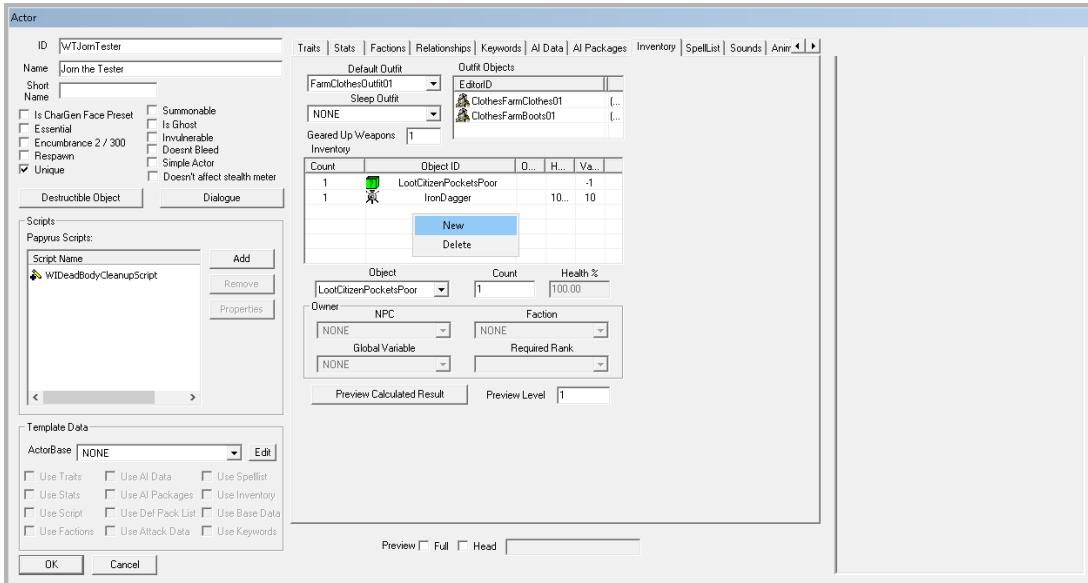


Figure 577 - Adding Jorn's key to his inventory.

Set the new inventory item to the key we created earlier.

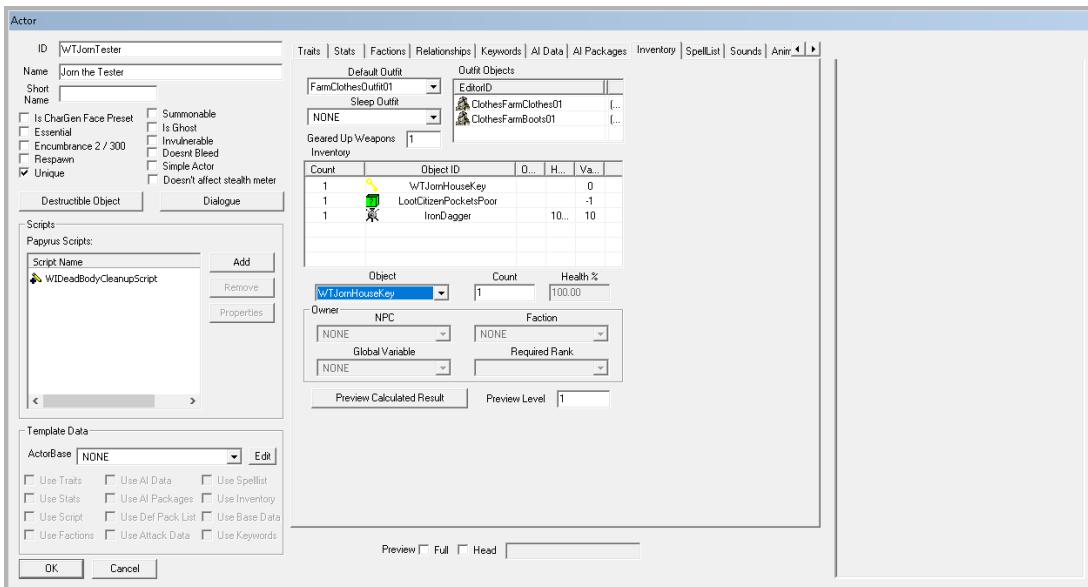


Figure 578 - Setting the new object as Jorn's key.

Click OK to close out of Actor properties.

Next, we need to set up a new locklist for the interior cell. This will contain a list of NPCs that are allowed to lock and unlock doors when entering/leaving this cell.

In the Object Window go to Miscellaneous > FormList, right-click on an existing form list and select New.

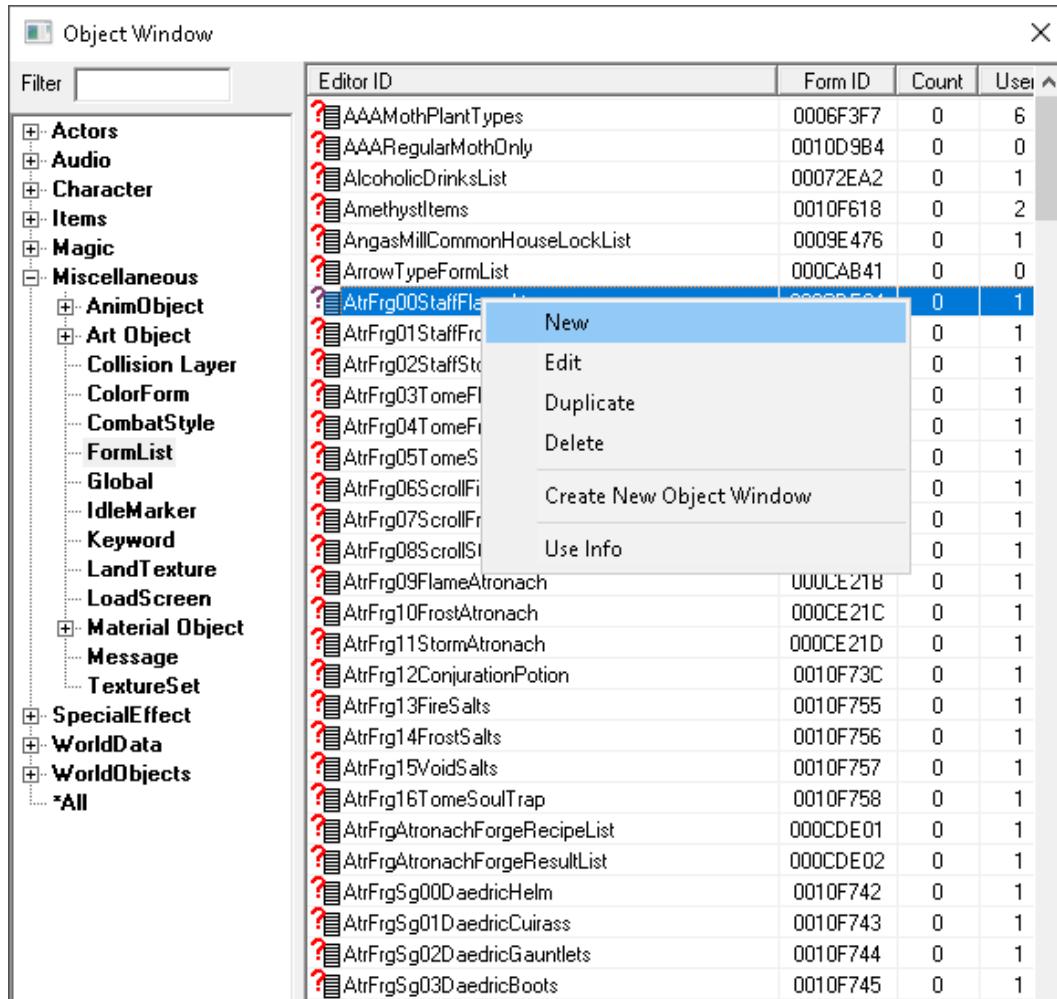


Figure 579 - Creating a new form list.

Set the form ID. For this example I'm going to call it WTJornHouseLockList.

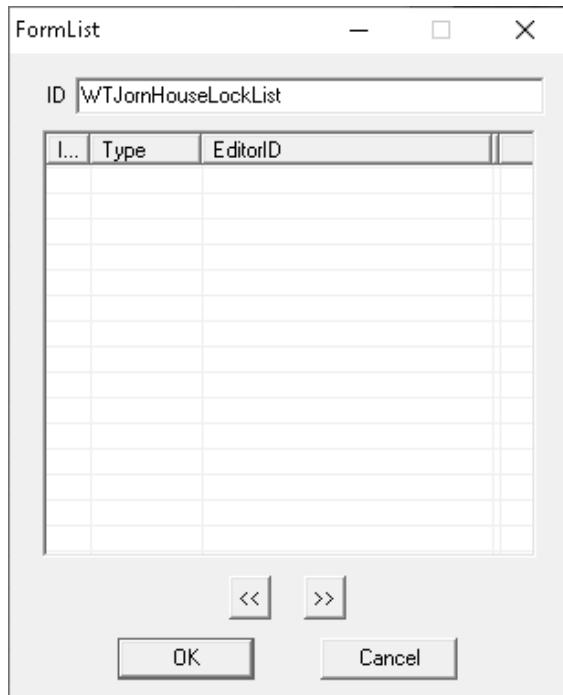


Figure 580 - New lock list.

In the Object Window, go to Actors > Actor > Actor and drag and drop WTJornTester into the form list.

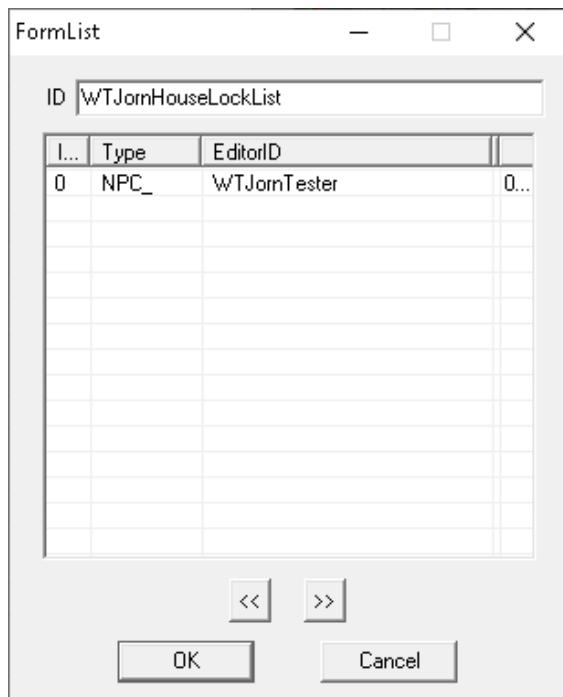


Figure 581 - Jorn added to the lock list.

Click OK to close the form list properties.

Now we need to configure the interior cell to set Jorn as the home owner.

In the Cell View window, right-click on LundsHut01 and select Edit.

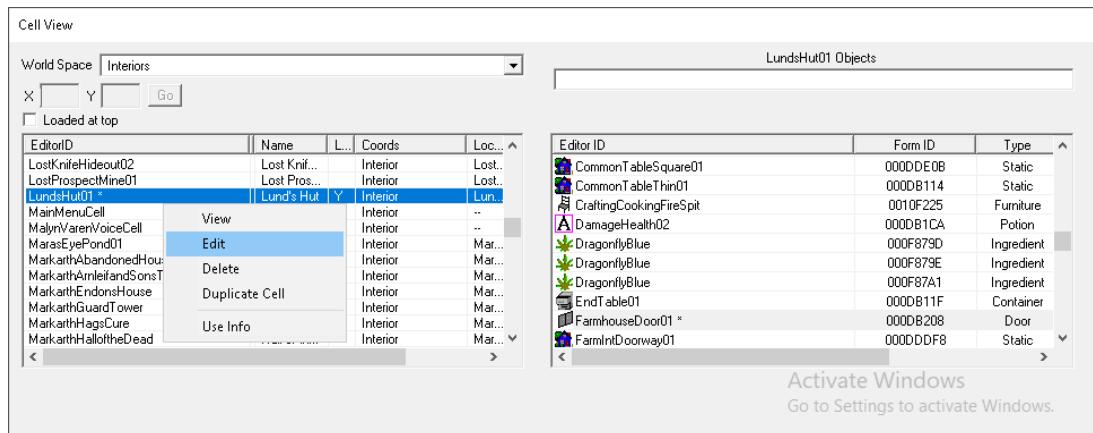


Figure 582 - Editing the Lund's Hut cell.

Go to the Interior Data tab.

Set the Owner faction drop-down to WTJornHouseFaction.

Set the Lock List drop down to WTJornHouseLockList.

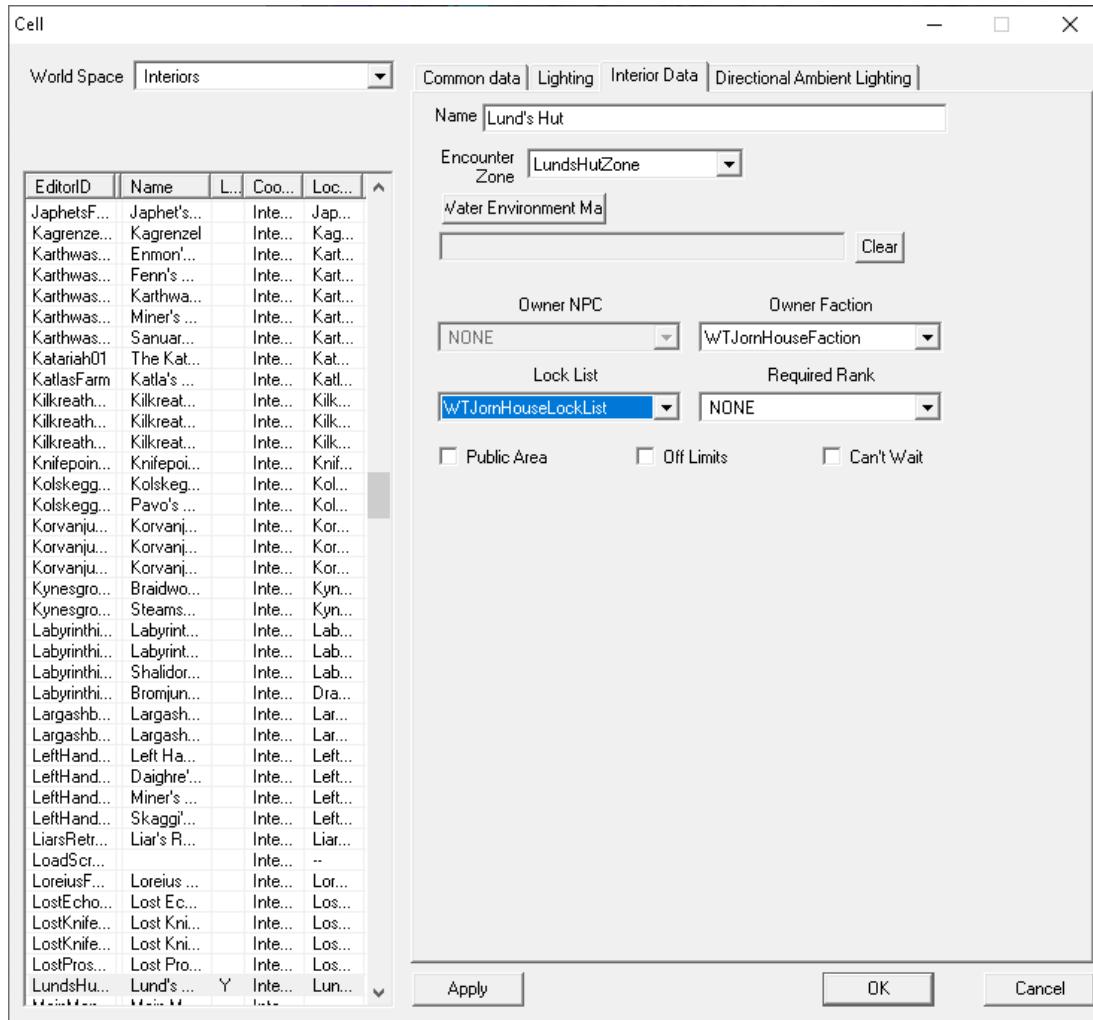


Figure 583 - Setting up cell ownership and assigning a lock list.

Click OK to close out of cell properties.

If we check in-game, we'll now see that the front door to Lund's Hut will be locked.



Figure 584 - Front door locked.

If we break in, Jorn will tell us to leave.



Figure 585 - Jorn giving us a trespass warning.

## SETTING UP A BOSS AND MAKING A LOCATION CLEARABLE

In order to make a location ‘clearable’ we need to flag at least one NPC in that location as a ‘boss’. Once all NPCs flagged as a boss in a specific location are dead, the cell will be marked as ‘cleared’ if it’s associated location has the LocTypeClearable keyword.

Let’s continue on with the previous example and set Jorn as the new boss of Lund’s Hut.

Double-click or right-click on Jorn in the preview window and select Edit.

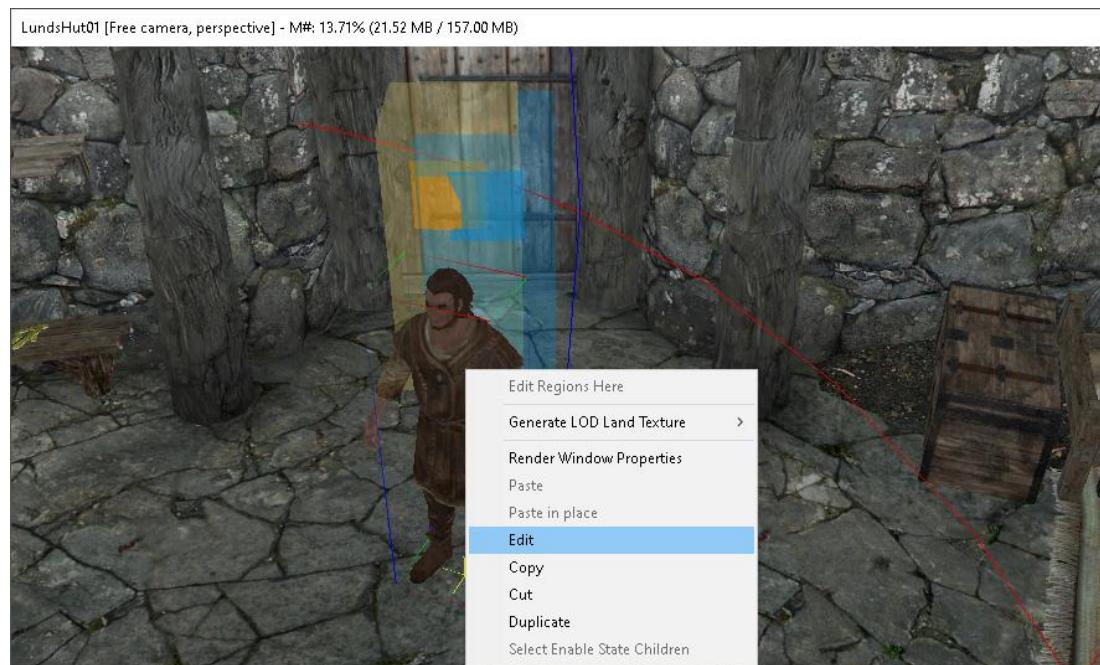


Figure 586 - Editing Jorn's reference.

Go to the Location Ref Type tab and set the Location Reference Type drop-down to 'Boss'.

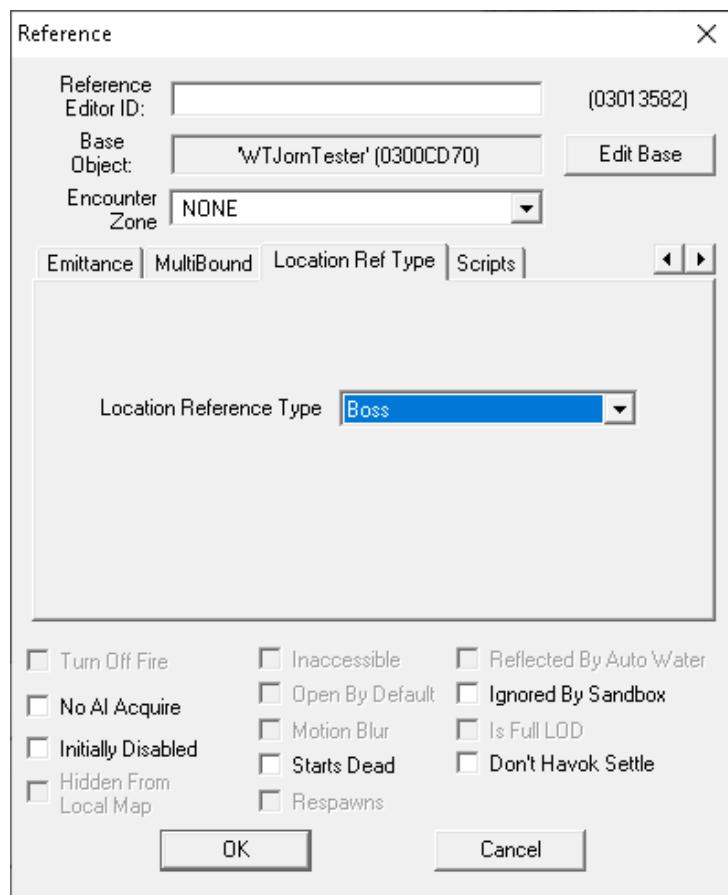


Figure 587 - Setting the location reference type.

Click OK to close.

Lund's Hut is a cell from the base game and already has a location set up for it. To take a look at it, in the Object Window go to WorldData > Location, right-click on LundsHutLocation and select Edit.

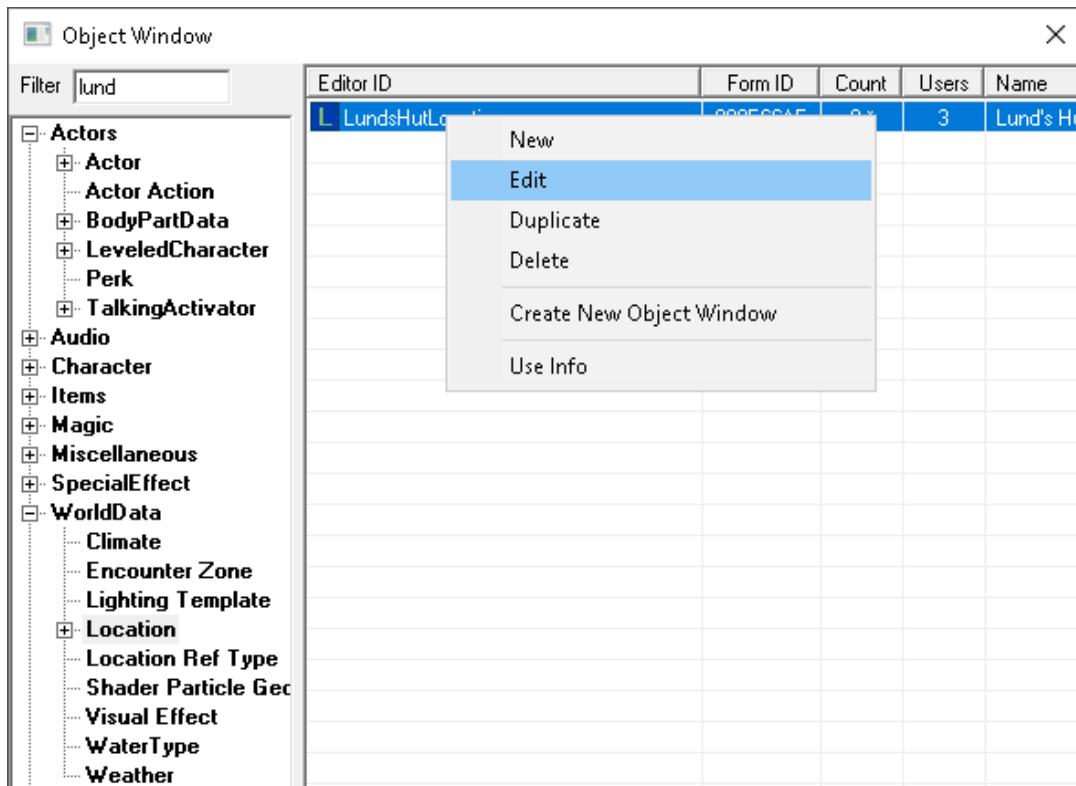


Figure 588 - Editing Location for Lund's Hut.

On the right hand side under the Location Ref Types tab, we can see WTJornTester flagged as the Boss for this location.

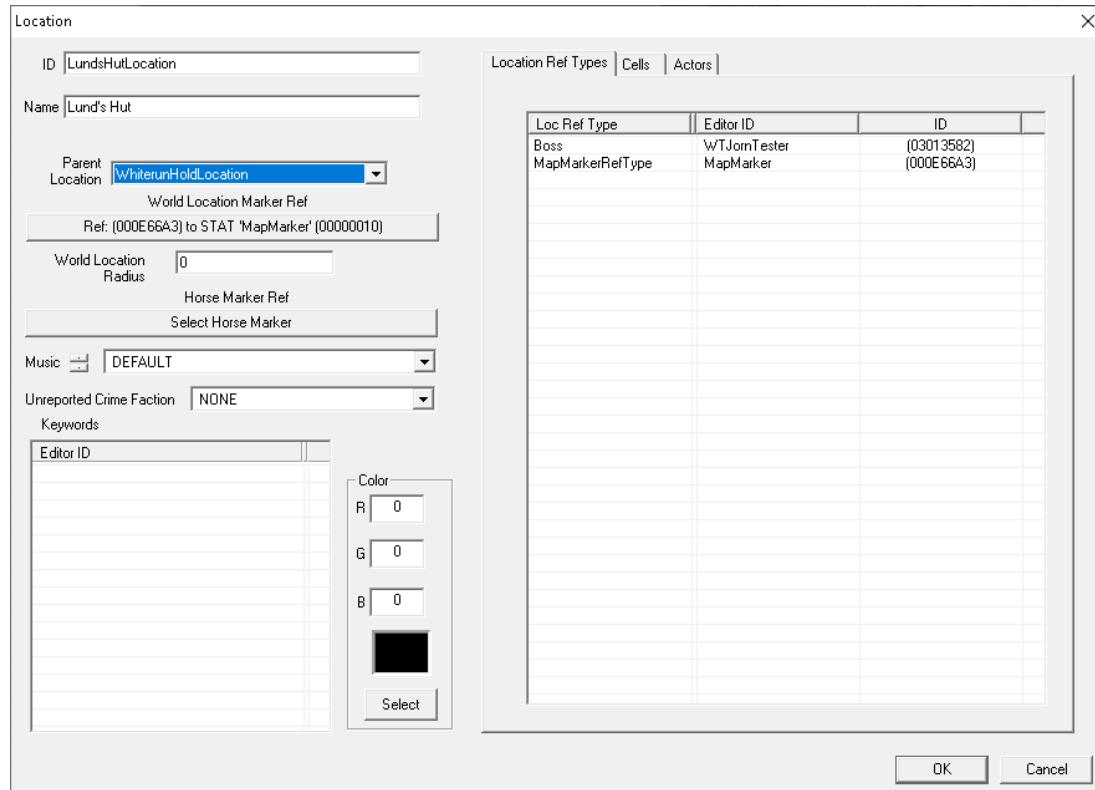


Figure 589 - Location reference types for Lund's Hut.

We'll need to add a keyword for this location to make it clearable.

Right-click in the Keywords list and select Add.

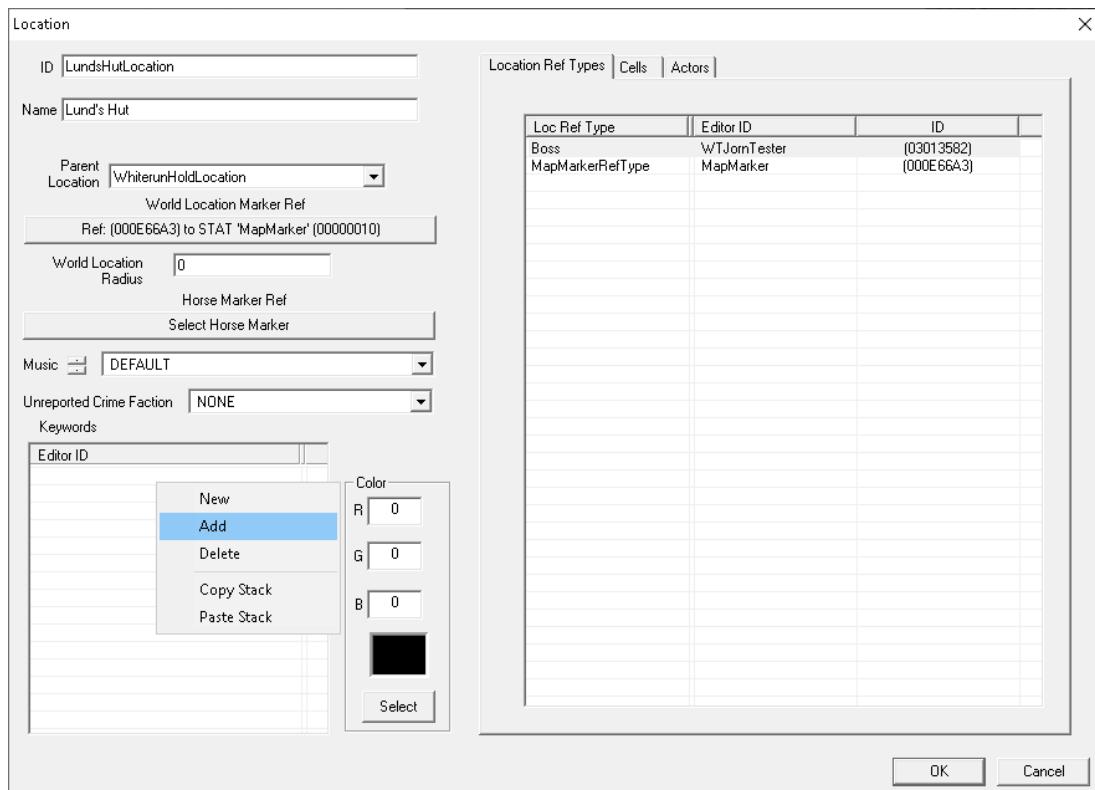


Figure 590 - Adding a new keyword for the Lunds Hut location.

Filter by 'clearable', select LocTypeClearable and click OK.

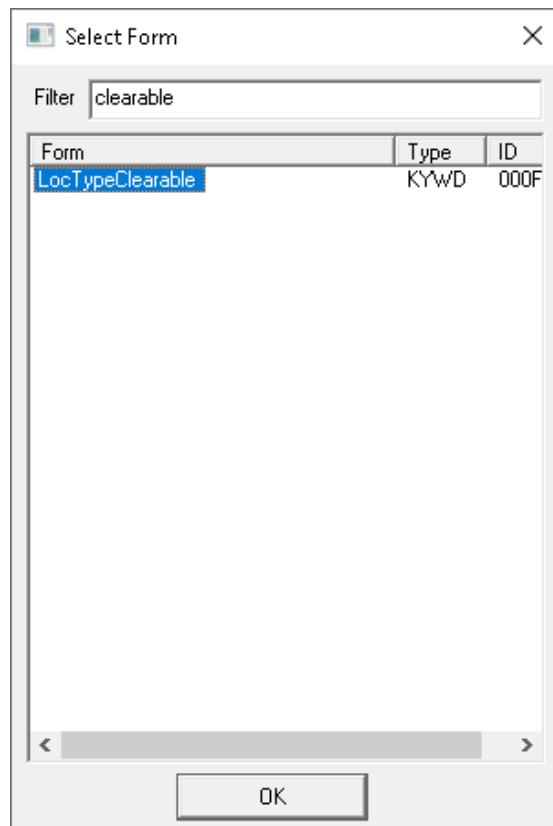


Figure 591 - Adding the LocTypeClearable keyword.

LocTypeClearable should now be listed in the Keywords list.

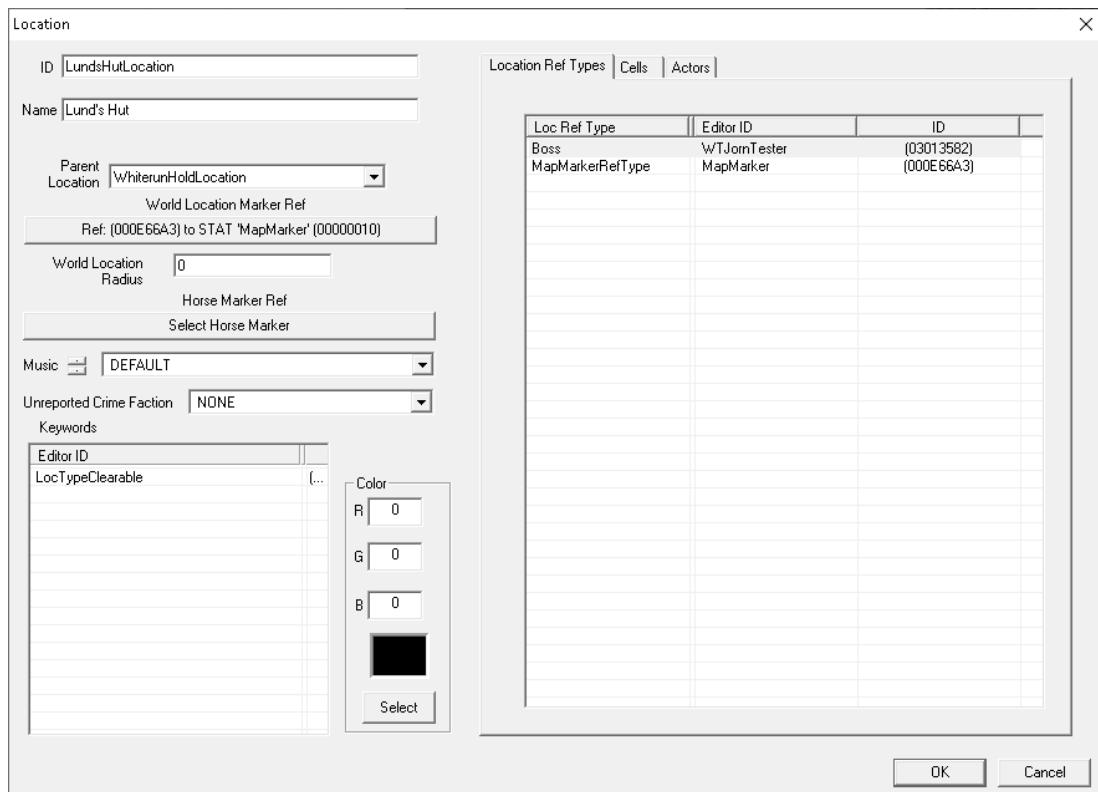


Figure 592 - LocTypeClearable added.

Click OK to close out of Location properties.

If we go in game and kill Jorn, we'll now see the location flagged as cleared on the map screen.



Figure 593 - Jorn is dead.

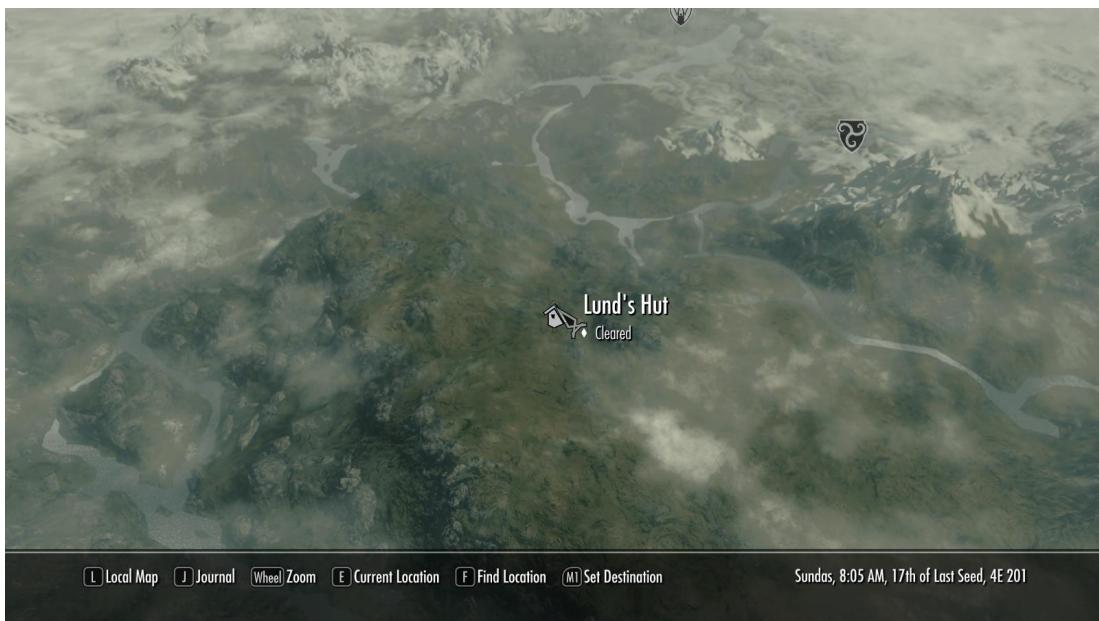


Figure 594 - Lund's Hut flagged as cleared.

And so Jorn the Tester's story comes to an end.

## ADDING AMBIENT CREATURES

Let's start adding a bit of life to our world space.

In the Object Window under Actors, filter by 'lvl\*prey'. This will give us five different ambient animal spawners. These will spawn in creatures like goats, foxes, rabbits, deer, etc. Drag and drop one of them into the current cell.

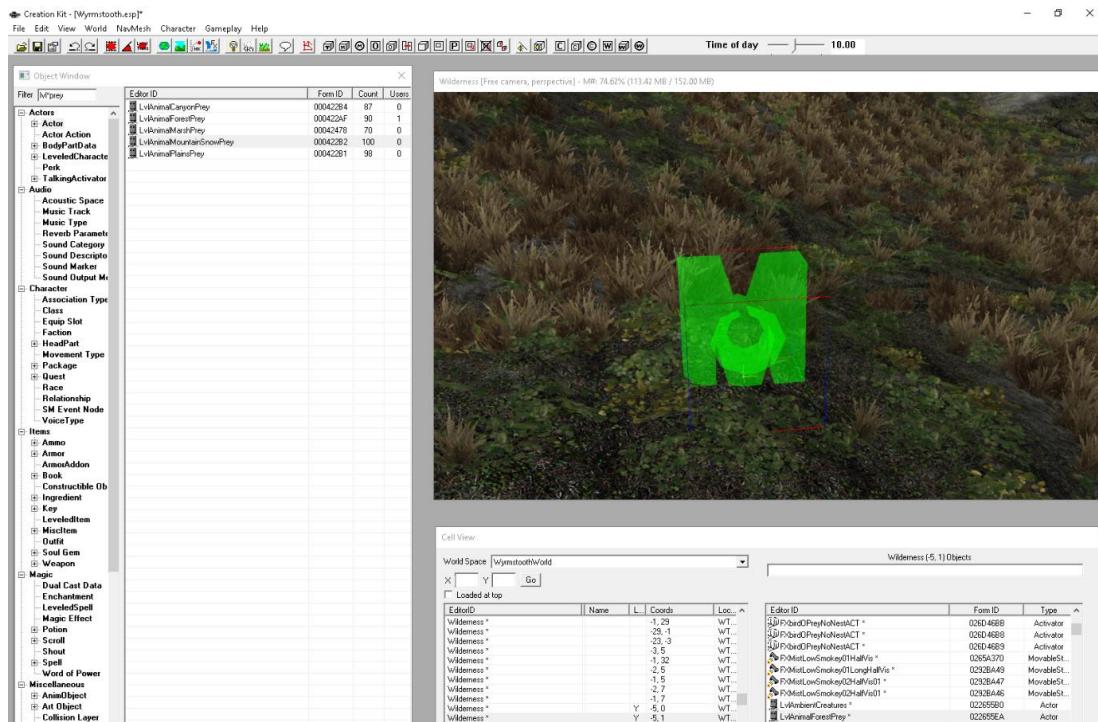


Figure 595 - Ambient creature spawner.

Levelled actor spawners are shown as an M with an arrow pointing in the direction the marker is facing. Their colour depends on the difficulty scaling.

White = No scaling.

Green = Easy.

Yellow = Medium.

Orange = Hard.

Red = Very Hard.

To add a predator spawner, filter by 'lvl\*predator' then drag and drop one into the scene.

To increase the difficulty of the spawned creature, double-click on its marker in the render window, go to the Leveled Actor tab, and change its Level Modifier to Medium.

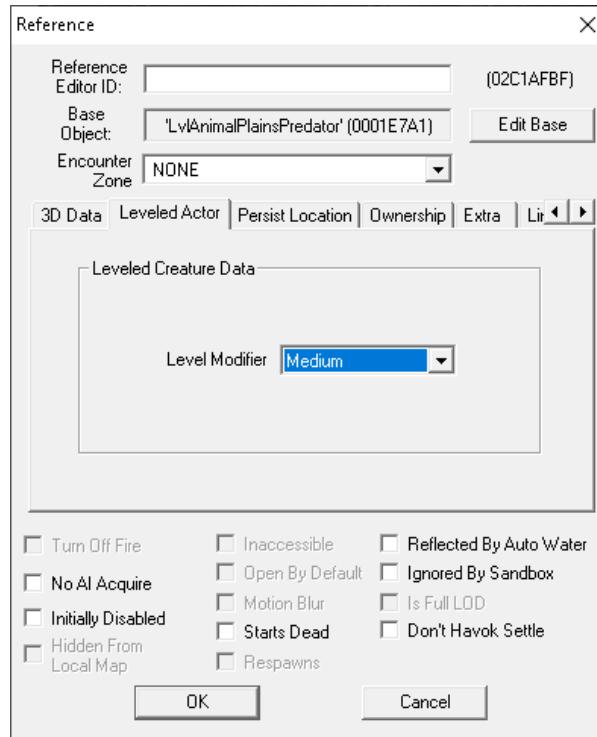


Figure 596 - Leveled Actor tab.

Click OK. The colour of its marker should change.

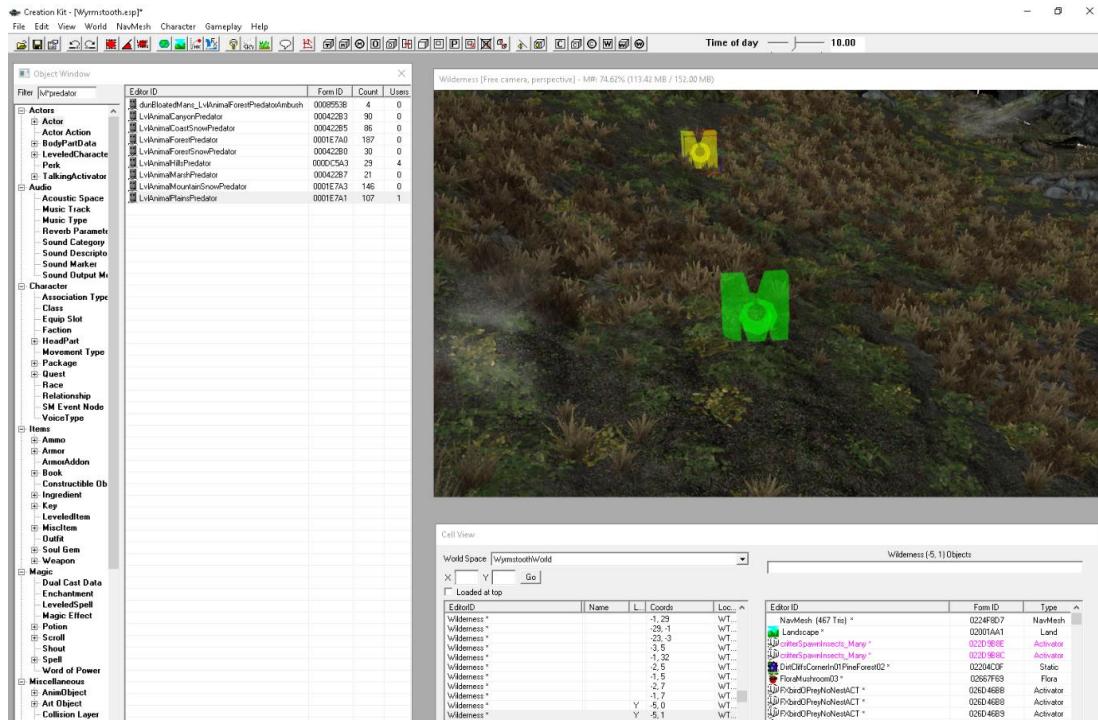


Figure 597 - Predator spawner.

Predators include aggressive creatures such as wolves, bears and sabre tooth tigers. They will hunt prey upon being spotted, including the player and other NPCs.

We can spawn in insects like butterflies, dragonflies and bees using a critter spawner. In the Object Window, browse to WorldObjects > Activator and filter by ‘critterspawn’. Drag and drop a spawner such as critterSpawnInsects\_Many into the render window. Critter spawners appear as a C above a green and blue sphere.

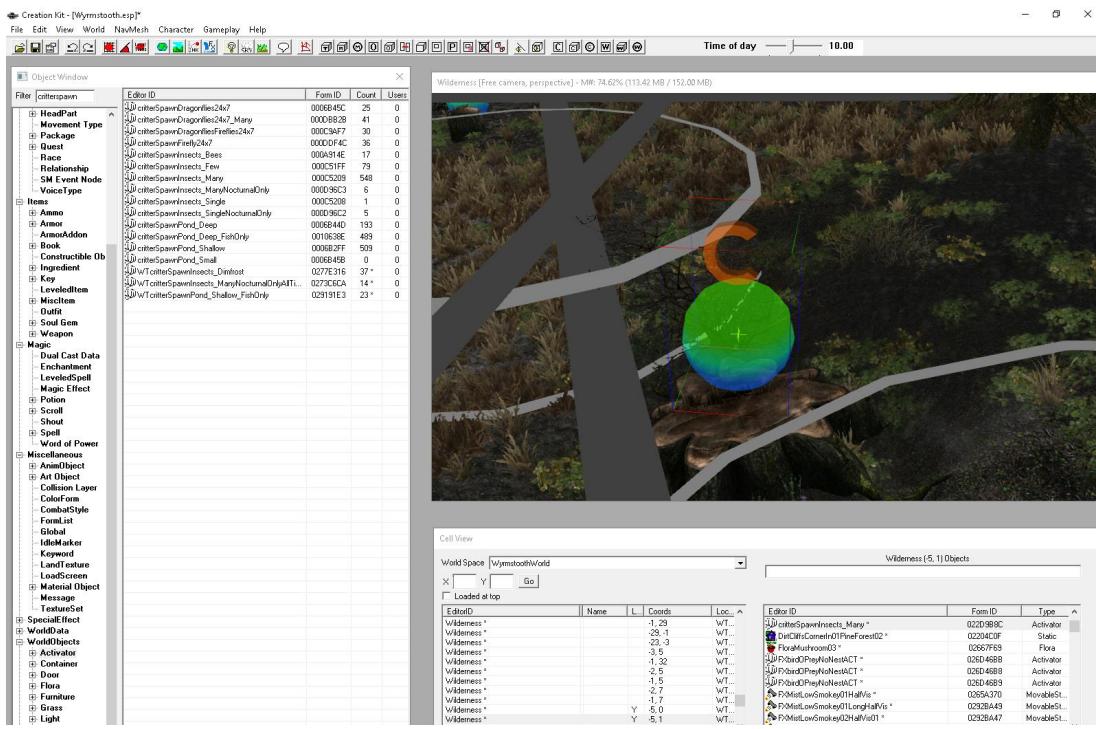


Figure 598 - Critter spawner.

Next, let's add some landing markers. They are used by butterflies to note spots where they are allowed to land.

In the Object Window, browse to WorldObjects > Static and filter by ‘critterlanding’. Drag and drop CritterLandingMarker\_Small into the render window.

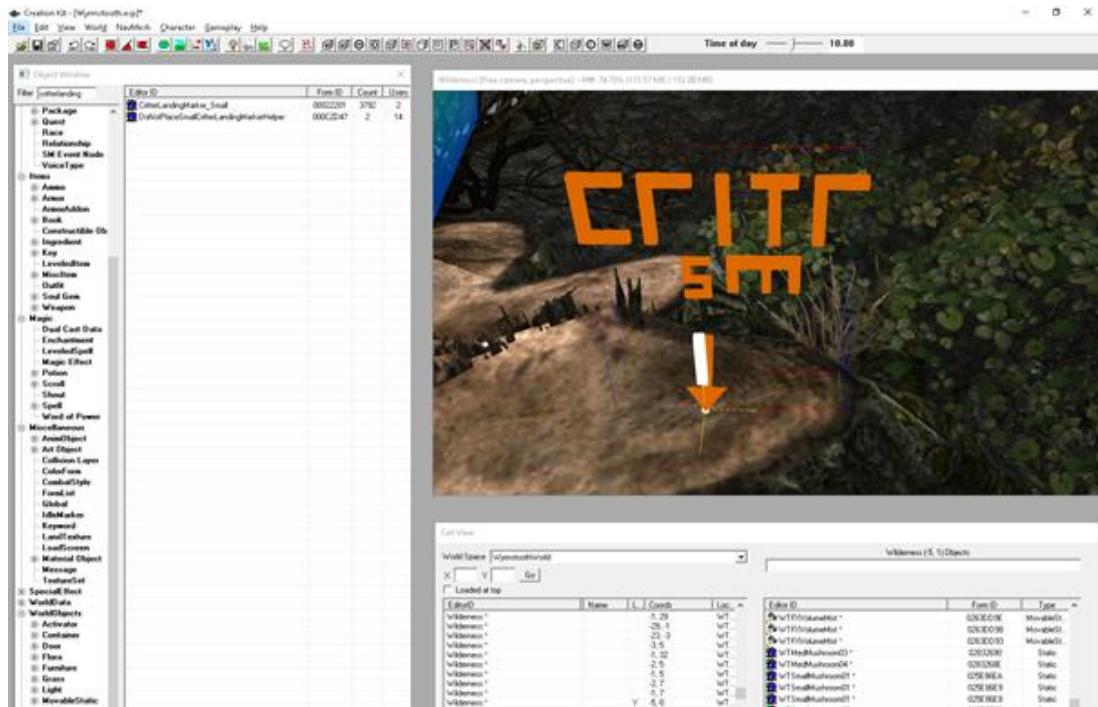


Figure 599 - Critter landing marker.

Critter landing markers are marked with an arrow pointing to a spot where a critter is allowed to land on. I usually place them on unobscured rock ledges, sign posts, building edges or on leaves of bushes where butterflies won't have to clip through solid objects to reach them.

Use the critterSpawnPond\_\* critter spawners to add fish to ponds and lakes.

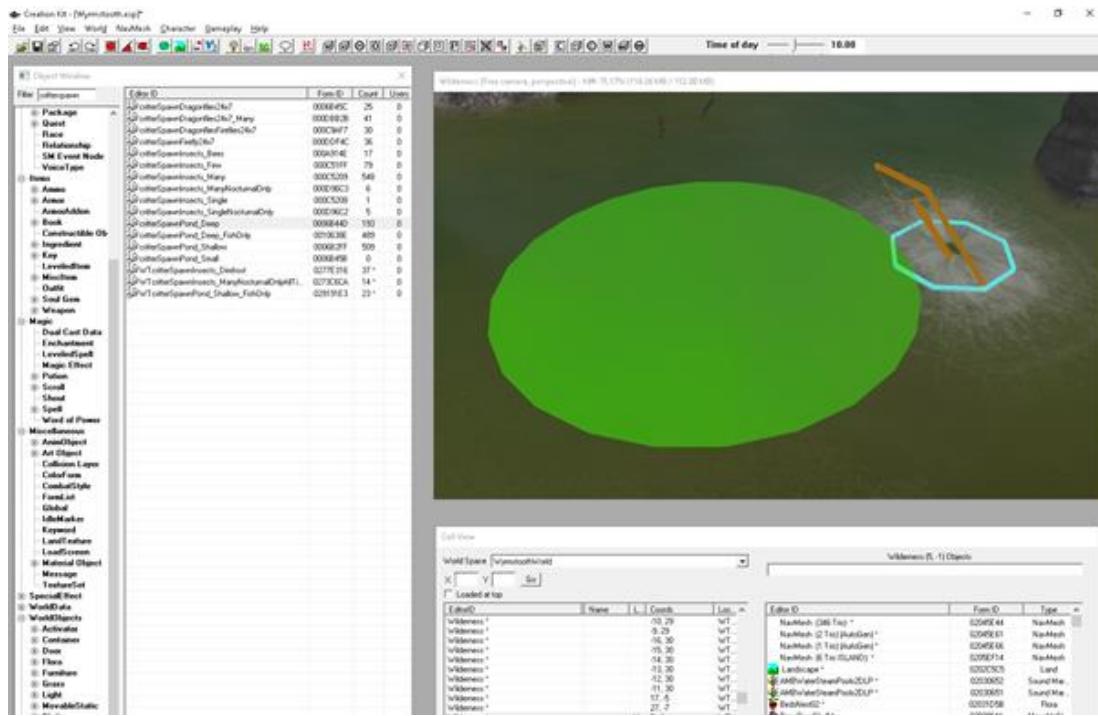


Figure 600 - Fish spawner.

They show up as an upside down green cone in the render window. Make sure the top of the cone is flush with the surface of the water, and the bottom of the cone doesn't clip through the ground.

To add birds, in the Object Window browse to WorldObjects > Activator and filter by 'fxbirdofprey'.

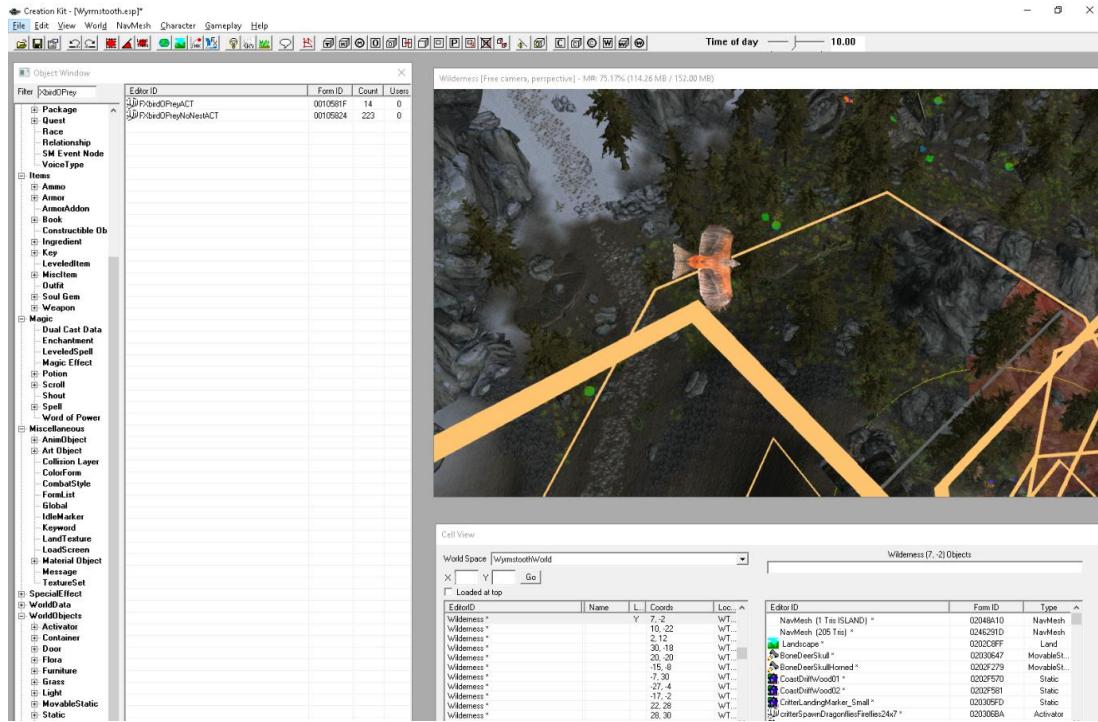


Figure 601 - Birds.

FXbirdOPreyNoNestACT adds free-flying birds, whereas FXbirdOPreyACT adds birds that will return to a nest that you can place in a tree or on top of a building.