How to edit move properties in DmC using UE Explorer

This is the first part in a series about modding DmC.
Find out how to replace objects with others here.

This tutorial will show you how to open a .upk in UE explorer, then edit a value you've found. Finding the value in the first place is often the hardest part of the process and is what takes the most time.

How to decompress a .upk file so we can open it in UE Explorer.

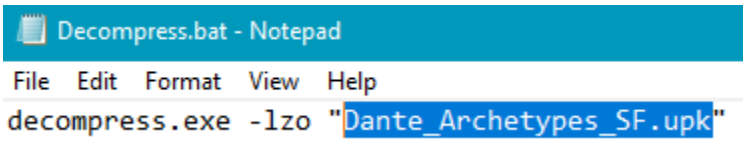
Download DmC modding tools and extract the files. This rar includes UPK Decompressor and UE Explorer. If you already have them, you can skip this.

Find the upk you wish to edit.
Most of them are in
D:\Steam\steamapps\common\DmC Devil May Cry\DevilGame\CookedPCConsole
And the DLC ones are in
D:\Steam\steamapps\common\DmC Devil May Cry\DevilGame\Published\Content

Copy the file you wish to edit (I'm going to edit Dante_Archetypes_SF.upk as it seems to have most of Dante's move properties).

Paste the file in \DmC modding tools\UPK Decompressor (next to Decompress.bat and decompress.exe).

Right click Decompress.bat and open it with a text editor.



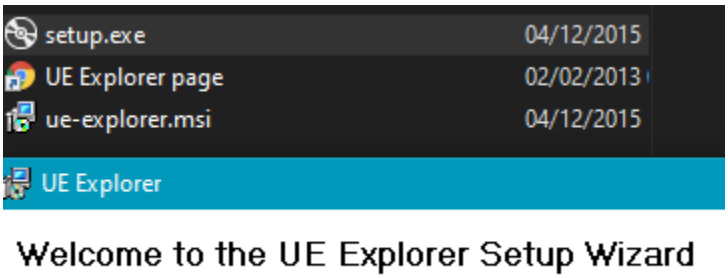
Replace the highlighted text with the filename of the .upk you want to decompress.

Save the file, close your text editor and double click decompress.exe.

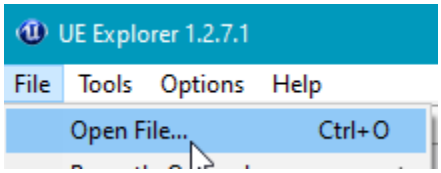
A new folder titled unpacked will be placed next to decompress.exe. Within this folder lies your decompressed upk file. I suggest selecting it and hitting ctrl c, ctrl v to make a backup we can revert to that anything ends up breaking to save time decompressing a new file.

You now have a decompressed .upk that can be viewed with UE Explorer. We can edit this, then place it in the game directory to have our changes applied.

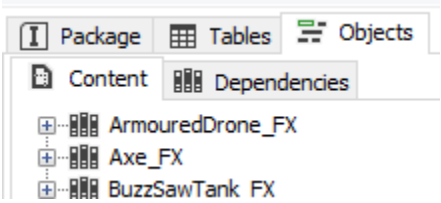
How to find and edit a value in UE Explorer



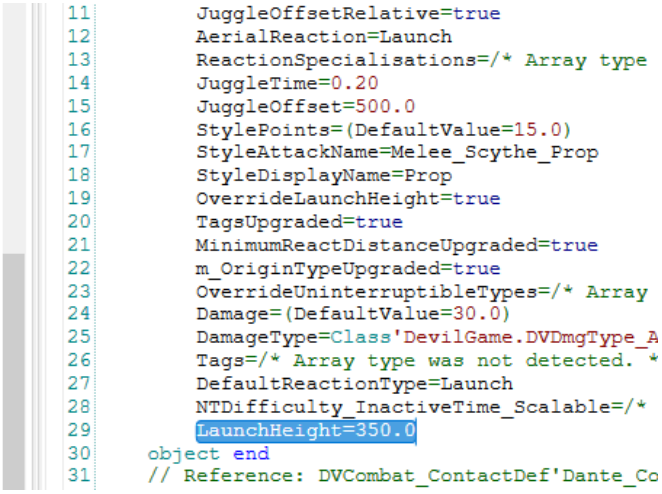
First, install UE Explorer. Run the exe found in \DmC modding tools\UE-Explorer-1.2.7.1.



Open UE Explorer through your Start Menu and click File>Open File then browse to your uncompressed .upk



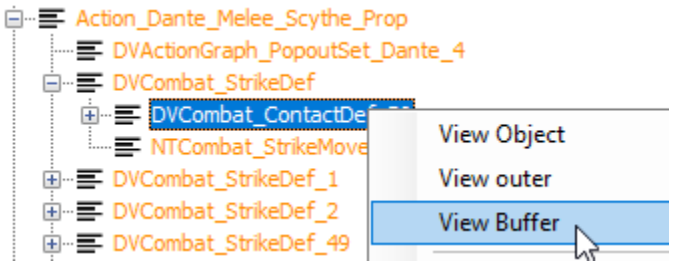
Click the Objects tab, then the Content tab. Here you can search for whatever you want to change. In my example I'm going to change the launch height of Prop.



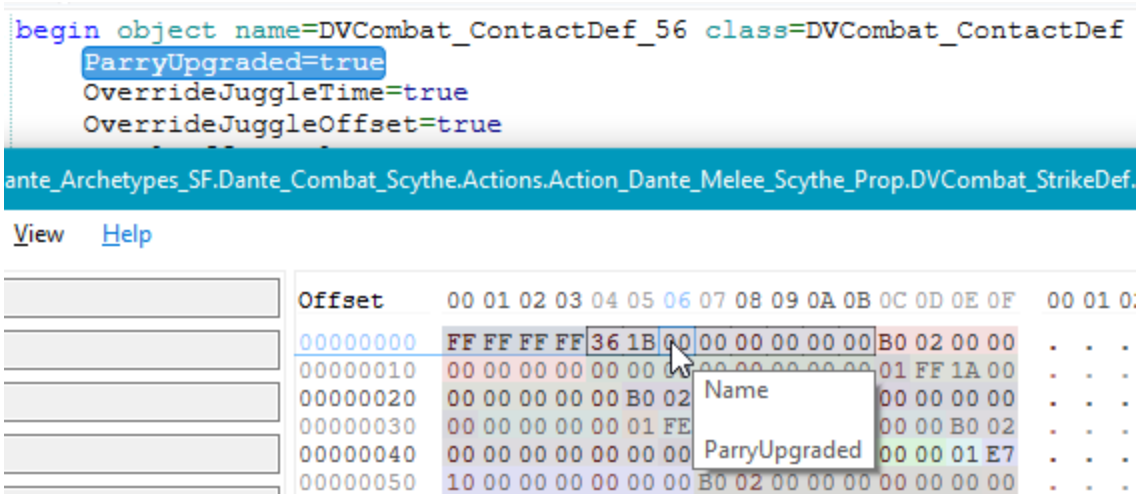
After some searching, I've found that

>Dante_Combat_Scythe
>Actions
>Action_Dante_Melee_Scythe_Prop
>DVCombat_StrikeDef
>DVCombat_ContactDef_56

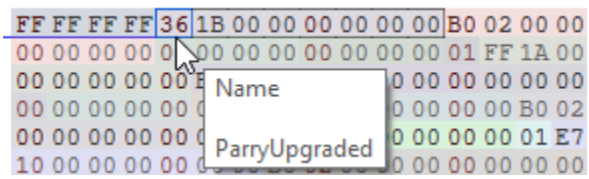
Contains a variable named LaunchHeight with a value of 350.0. I'm going to set this to 1000.0 so I can tell I've definitely found the right thing.



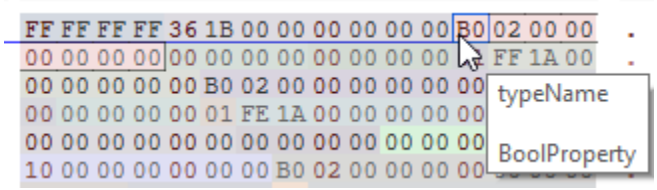
To change the value you've found, right click the object and hit View Buffer.



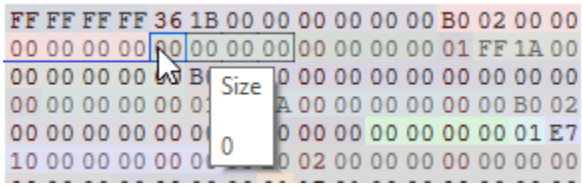
When hovering over bytes, you'll be shown what it is you're looking at. If the variable you want to edit is at the top of the text file, it'll be near the beginning of this too. There is a recurring trend that you can follow to find the data you want to edit.



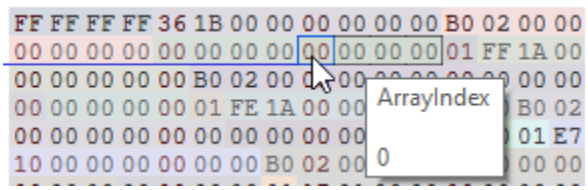
The name of the property always comes first.



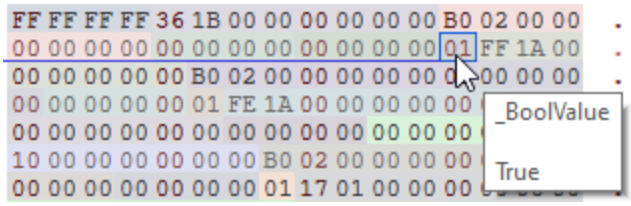
Followed by 8 bytes that contain which type of data the property will be (bool, int, float etc).



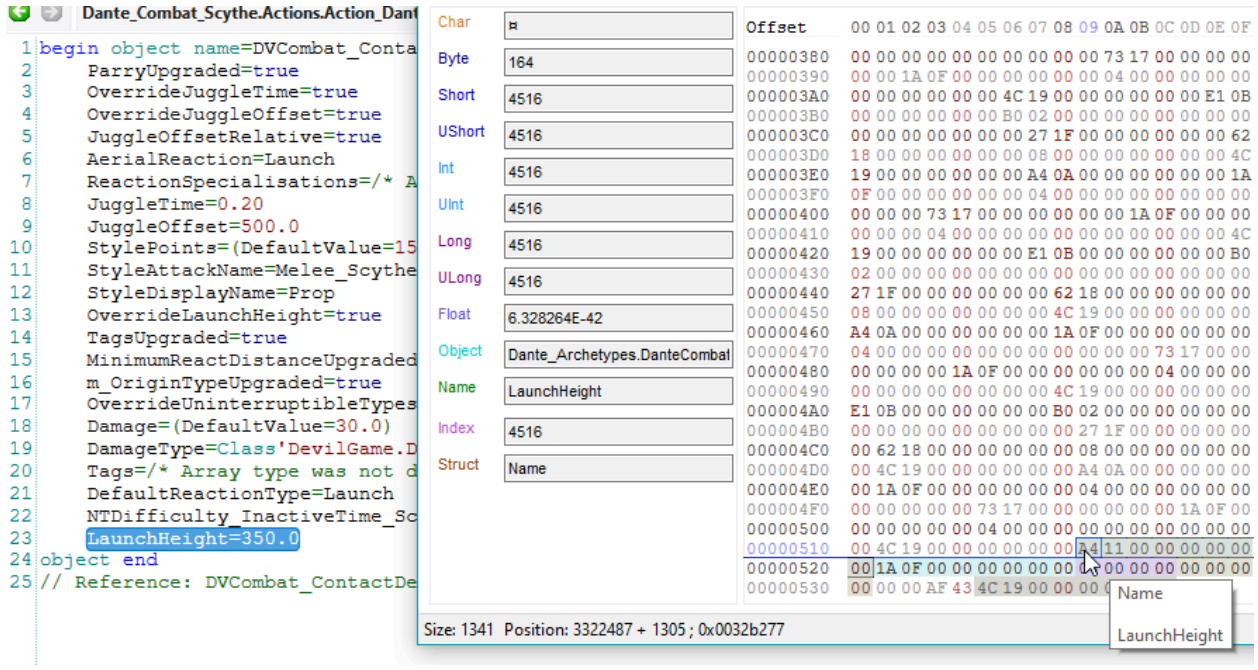
Followed by 4 bytes that contain the size of the property (this is 0 for booleans).



Followed by 4 bytes that contain an array index.



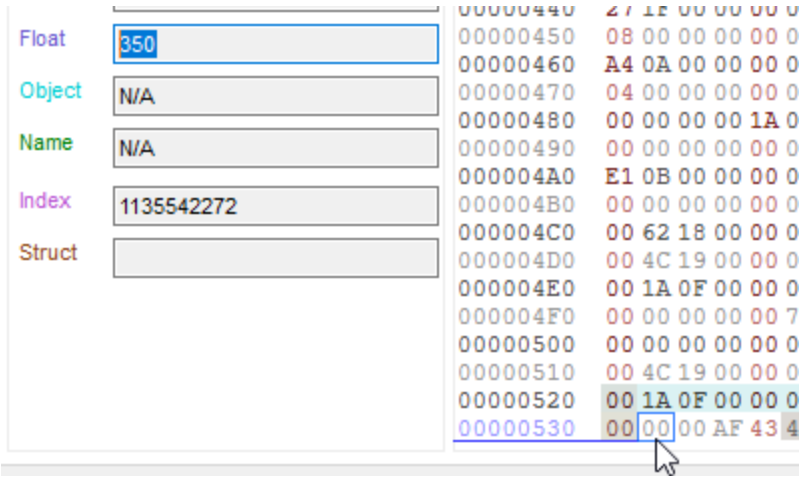
Followed by however many bytes of data (defined in the “size” bytes) containing the actual editable data.
For example, this is the “true/false” for ParryUpgraded. Double clicking here and replacing the 01 with an 00, pressing Save, then reloading the object (done by clicking another object and then back on this object) will show that ParryUpgraded has been changed to false.



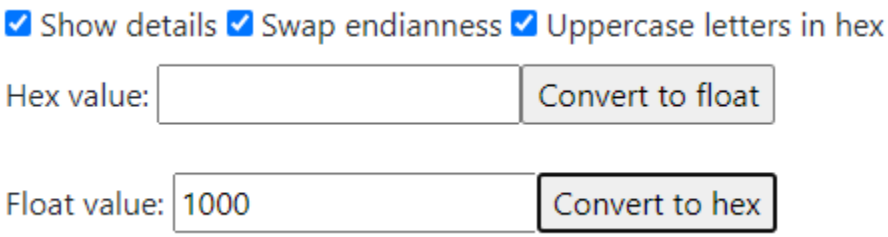
The variable I want to edit is right at the bottom of the object, so I started by looking there. I’ve found the name, so if I keep looking forward I’ll soon find the bytes that represent 350.0.

<u>Data types:</u>

<u>Floats</u>

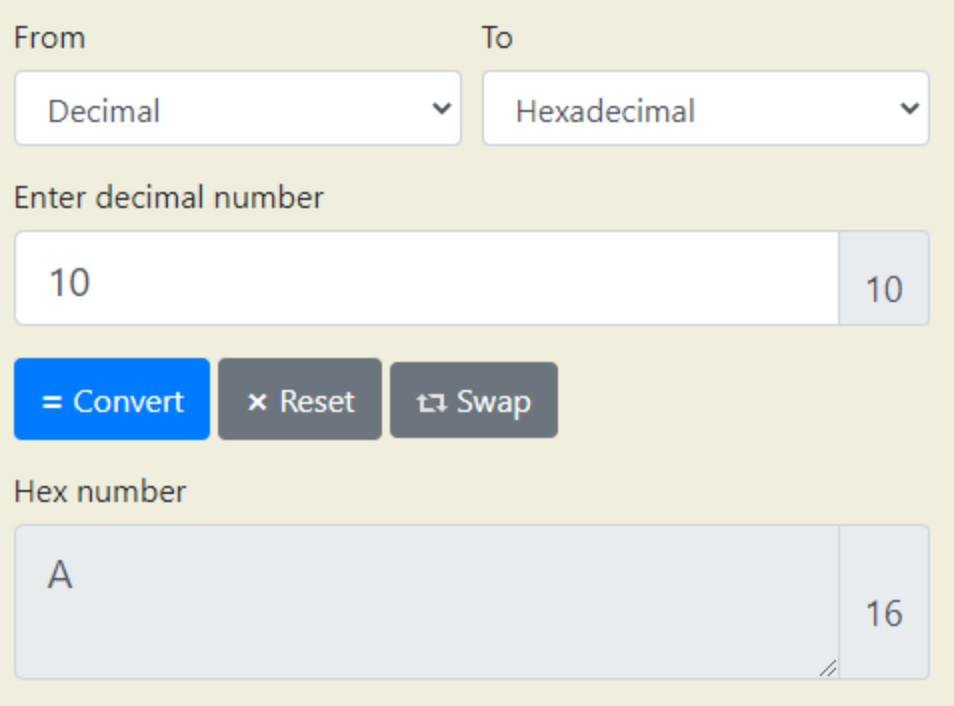


On the left side of this window you'll see different things that your bytes could represent. This tells me 00 00 AF 43 = float 350.0. Any time your value has a decimal point (a . after your number), you're looking for a float data type, similar to this.



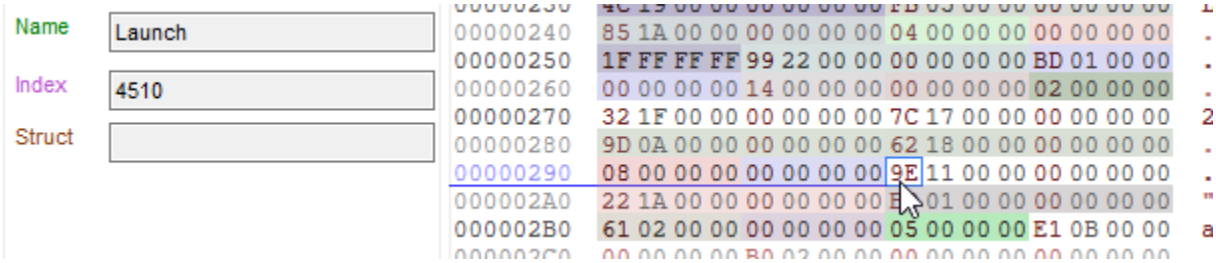
This website with the settings shown in my screenshot (with everything ticked) will tell me what bytes I need to type in to get a launch height of 1000.0. I double click from the byte I want to edit from and simply type in what I'm given, which in my example is 0x00007A44 (00 00 7A 44).

Integers



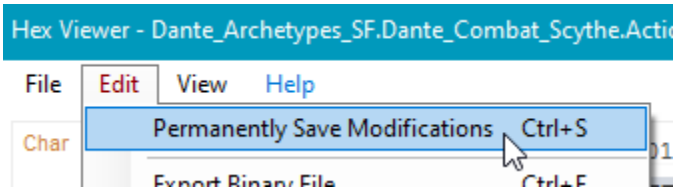
If your data type is not a float, the process is simple. If I want to change a 5 to a 6, I would replace 05 00 00 00 with 06 00 00 00. Watch out when you get to values larger than 9, as hex counts to 16 rather than 10. [This website] will tell you what value to type in if you need it (If I wanted Decimal 10 I would type in 0A, etc.).

Objects

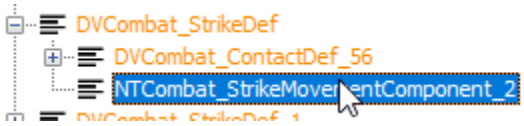


Objects work the same way. If I select the bytes after DefaultReactionType I can see Launch is represented by 9E 11. If I open another object I can see that Air Juggle = 20 01. If I wanted to, I could replace 9E 11 with 20 01 to make this move juggle instead of Launch.

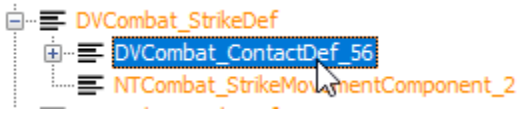
Saving our changes



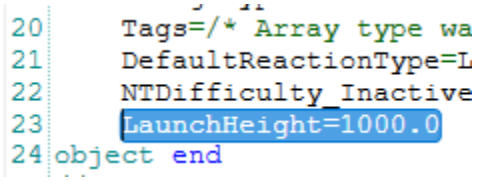
Once you've typed in your changes, hit Ctrl+S or go to Edit>Permanently Save Modifications to save them. There is no undo button, so if you break something you're going to need to revert to your backup.



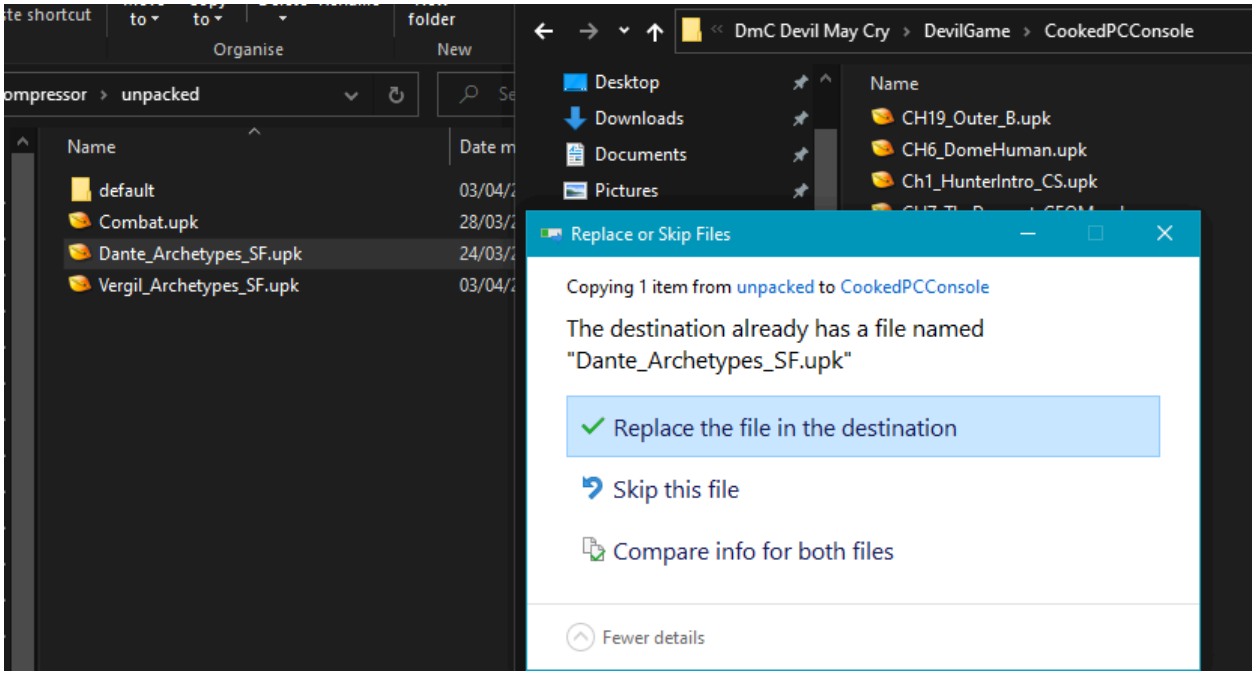
Once you've saved your file, close that window and click another object.



Then click back on your object.



Hopefully you'll see that the hex edit you made has updated the text in this window. It's a good idea to check to see if you edited the right thing by doing this before testing your change ingame.



Assuming everything went well, it’s time to replace your ingame files with your edited files. Copy your edited file and paste it in the game directory you found it, as the game will accept unpacked files (this is lucky as we have no way to recompress).

Open the game and test out your change! This poor guy got launched further than I can see so I can safely say I’m editing the right thing. Now to find a value I like.